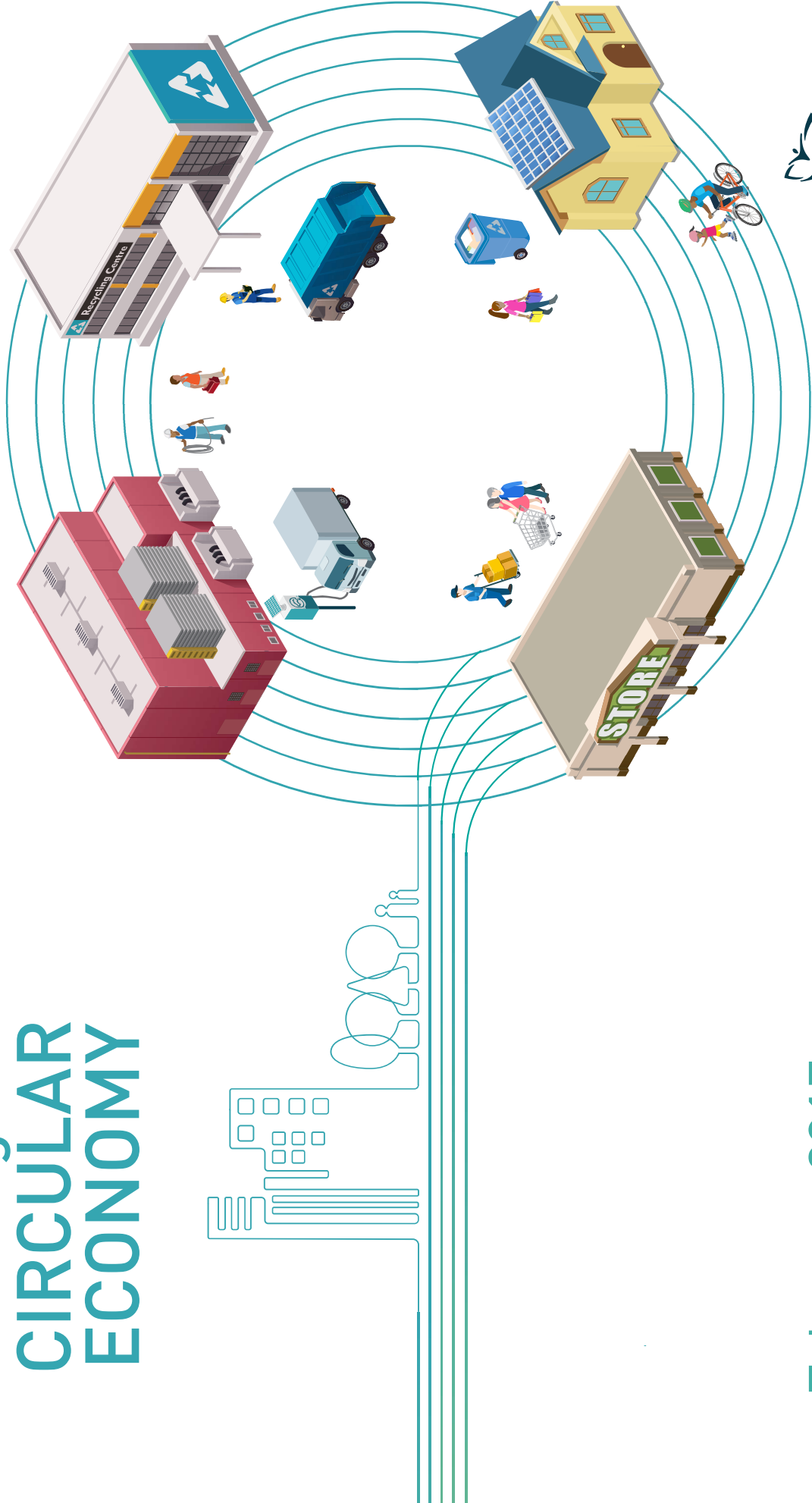


Strategy for a
WASTE-FREE
ONTARIO
Building the
CIRCULAR
ECONOMY



February 2017

Table of Contents

4	Transforming Ontario into a Leader	
4	What is a Circular Economy?	
6	Why Build a Circular Economy?	
7	How Will We Achieve a Circular Economy?	
8	Our Foundation for a Circular Economy	
10	Our Strategy to Achieve a Circular Economy	
10	Vision	
10	Goals	
11	Objectives and Actions to Achieve Ontario's Vision	
14	Actions Towards a Waste-Free Ontario	
14	Objective 1: Enhance Provincial Direction and Oversight	
14	Action 1: Empower the Resource Productivity and Recovery Authority	
15	Action 2: Issue policy statements to provide clear direction on the provincial interest	
17	Action 3: Establish a registry and build data capacity to provide for evidence-based decisions	
19	Objective 2: Enable Efficient and Effective Recovery Systems	
19	Action 4: Transition existing waste diversion programs to new producer responsibility framework without disruption of services	
23	Action 5: Amend the 3Rs Regulations to increase resource recovery across all sectors	
24	Action 6: Establish service provider requirements to protect the environment while promoting resource recovery	
25	Action 7: Ensure landfills are well planned and managed to minimize their need to reduce greenhouse gas emissions	
27	Action 8: Establish promotion and education requirements to support public participation in resource recovery	
28	Objective 3: Increase Waste Reduction and Improve Resource Productivity	
28	Action 9: Designate new materials to ensure producers are fully responsible for recovering more materials from products and packaging	
30	Action 10: Implement an action plan to reduce the volume of food and organic wastes going to landfill	
32	Action 11: Implement an Excess Soil Management Policy Framework to increase the reuse of excess soil, while protecting human health and the environment	
33	Action 12: Adopt and implement modern regulatory approaches to build on and promote innovative best practices	
34	Objective 4: Create Conditions for Sustainable End-Markets	
34	Action 13: Improve and establish environmental standards to provide a level playing field and a strong foundation for markets	
35	Action 14: Use green procurement practices to build market demand for recovered materials	
36	Action 15: Implement disposal bans to direct materials to end-markets	
37	Coordination, Collaboration and Implementation	
41	Measure and Evaluate Success	
42	Conclusion	
43	Endnotes	

Minister's Message



I am extremely excited to share with you the Ontario's Strategy for a Waste-Free Ontario: Building the Circular Economy.

On average, each person in the province produces more than 850 kilograms of waste every year. For the past 10 years, we have only recycled about 25 per cent of our waste and the situation has not improved. This means that over eight million tonnes of our waste is sent to landfill each year.

The waste sector is also responsible for approximately six per cent of the greenhouse gas emissions we produce.

In late 2016, Ontario proclaimed the Waste Free Ontario Act, comprising the Resource Recovery and Circular Economy Act and the Waste Diversion Transition Act.

This piece of legislation will tackle the problem of waste generation by increasing resource recovery and moving toward a circular economy. At the heart of the legislation is the idea that producers should be responsible for the end-of-life management of their products and packaging.

The legislation is accompanied by this strategy, which lays out Ontario's vision for a circular economy and goals of a zero-waste Ontario with zero greenhouse gas emissions from the waste sector.

In order to fundamentally change the way we think about waste in Ontario, this strategy outlines the formative actions we will take in the coming years that will help us achieve our goals. It recognises the tremendous environmental and economic opportunities that exist in shifting our mindset and embracing a circular economy — a system in which products are never discarded, but reused, recycled and reintroduced into new products.

Coupled with Ontario's Climate Change Action Plan, this waste framework affords a viable opportunity to drive performance, innovation and competitiveness, and stimulate economic growth and development. It's an exciting opportunity to create better products, reduce our reliance on extraction of virgin materials, and support our efforts to fight climate change.

A stylized, handwritten signature in black ink.

Glen Murray

Ministry of the Environment and Climate Change

A. Transforming Ontario into a Leader



Ontario continues to generate more and more waste. In 2014 alone, about 11.5 million tonnes were generated in the province¹ – that’s nearly a tonne of waste per person **every year**.

Historically, three-quarters of this waste has been sent to landfill.² This figure has not improved in almost a decade.

At the same time, **climate change** has become a reality, with impacts already being experienced across Ontario. In June 2016, Ontario released its [Climate Change Action Plan](#). The plan describes the actions we will take over the next five years to fight climate change, reduce greenhouse gas pollution and help move us to a prosperous low-carbon economy.

The plan recognizes that managing how we use our resources will be a critical part of achieving these goals. It commits to reducing emissions from waste and moving Ontario towards a **circular economy**.

Sending valuable resources to landfill poses risks to both human and environmental health and leads to unpredictable pricing increases, supply chain risks and growing pressures on virgin materials.

To change how we manage our waste, we must change our thinking. With a new mindset, Ontario has an opportunity to reduce emissions coming from waste, decrease our reliance on virgin materials, enhance environmental protection and bring new economic growth, job opportunities and savings to consumers and taxpayers.

What is a Circular Economy?

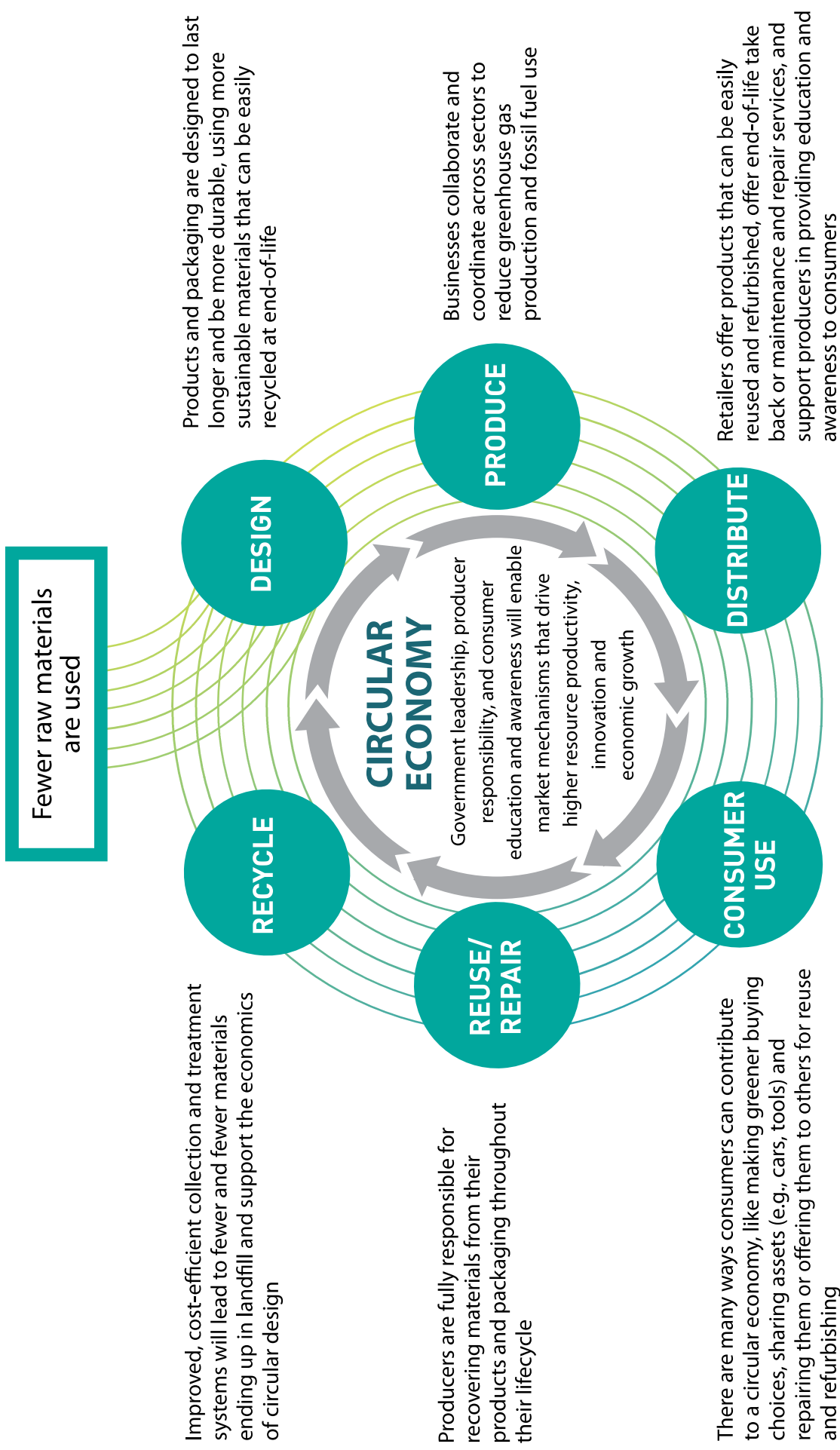
In the traditional waste management system, materials move through a linear “make-use-dispose” process where they are manufactured from raw resources, consumed and ultimately sent to landfill. This model of consumption has become part of our culture. It has resulted in a 19 per cent increase in absolute greenhouse gas emissions between 1990 and 2014 as the amount of waste disposed in landfills has increased.³

A circular economy aims to eliminate waste, not just from recycling processes, but throughout the lifecycles of products and packaging. A circular economy aims to maximize value and eliminate waste by improving the design of materials, products, and business models.

A circular economy goes beyond recycling. The goal is not just to design for better end-of-life recovery, but to minimize the use of raw materials and energy through a restorative system.

In a circular economy, the value of products and materials is maintained for as long as possible. Waste is minimized and resources are kept within the economy when a product has reached the end of its life, to be used again to create further value.

What is a Circular Economy?



Why Build a Circular Economy?

For Ontario to continue to grow, it is important that we move toward a circular economy. This model affords a viable opportunity to successfully advance environmental priorities, drive performance, innovation and competitiveness and stimulate economic growth and development.

A circular economy protects the environment.

It recognizes that Ontario's landfills do not have infinite capacity. Given the projected population growth and economic trends, it is forecasted that Ontario will need 16 new or expanded landfills by 2050 if no progress is made in resource recovery and waste reduction.⁴

Improved resource recovery will reduce greenhouse gas emissions and ensure potentially harmful materials are properly managed.

Data tells us that increasing Ontario's organic waste diversion rate by about 10 per cent, from 38 per cent to 48 per cent, would avoid an additional 275,000 tonnes of greenhouse gas emissions – the equivalent of removing almost 64,000 cars from Ontario roads each year.⁵

A circular economy will help Ontario stay competitive. Increasing waste diversion rates and improving resource recovery will help

Ontario businesses stay competitive as the global economy becomes more resource productive. Producers will save money by using less material and through better end-of-life management for products and packaging. Businesses can minimize costs and maximize diversion by leveraging economies of scale to find the most efficient ways of recovering materials and returning increased volumes of recovered materials back into the economy.

Where domestic markets are underdeveloped, producers could also benefit from global end-markets in jurisdictions with strong environmental standards to ensure that marketing these materials internationally achieves Ontario's environmental goals.

Reducing reliance on raw materials will add significant value to the economy by creating or expanding the reuse and remanufacturing sectors. Businesses that collect, process and broker recovered waste materials and companies that manufacture and distribute products made with recovered materials stand to benefit from expanding markets in these areas.

This shift will help save taxpayers' money, create jobs and increase GDP. As the amount of material we throw away grows, the cost of collecting and managing residential waste, largely funded by municipal taxpayers, increases. According to Statistics Canada, local government expenditures

for waste management in Canada increased from \$1.8 billion in 2004 to \$3.2 billion in 2012.⁶ Studies have also shown that Ontario's existing waste diversion programs can create up to 10 times more jobs than waste disposal.⁷ It is estimated that for every 1,000 tonnes of waste diverted in Ontario, seven jobs are created through the existing waste diversion programs.⁸

A circular economy drives innovation.

Businesses will be encouraged to design long lasting, reusable and easily recyclable products, adding significant value to the economy by creating or expanding the reuse and remanufacturing sectors.

Ground-level innovation in this field will be driven by producers who are piloting business models based on extended product lifecycle thinking. These producers have the power to influence product design and effect change. Given their influence on global supply chains, producers can accelerate collaboration globally and across sectors.

Jurisdictions worldwide are acknowledging the benefits of a circular economy. For example, China,⁹ Scotland¹⁰ and the EU¹¹ have each taken steps to shift to a circular model of production and use that promotes resource recovery and green consumption.

How Will We Achieve a Circular Economy?

A circular economy calls for a culture change.

Our relationship with the products and services we purchase will be changed fundamentally in a circular economy. Producers will be incented to produce products for easier repair, reuse, remanufacturing and recycling.

To shift to a circular economy, we need to change Ontarians' views about waste, to recognize the value in materials we would have once sent to landfill and acknowledge the influence of the linear economy on our lifestyle choices.

A circular economy calls for a group effort.

To achieve this shift, we will need the support and cooperation of all partners, including municipalities, producers, waste management service providers and consumers.

Ontarians from all corners and sectors of our province have a long history of waste reduction, reuse and recycling. Ontarians have actively sought opportunities to promote resource recovery, whether through producer responsibility programs, municipal diversion services, or local initiatives like yard sales, swap meets and repair events.

This cooperation will continue to be an important part of the circular economy. New, innovative

operating methods and opportunities to

maximize the use of materials will come from cross-sectoral collaboration and bold leadership, and will be built on existing efforts. Education and awareness are essential to nudge these changes and will be critical to support Ontarians' increased participation.

A circular economy calls for strong leadership.

Scaling up to a circular economy will require government leadership. We need to change our policy framework. Traditional views about waste lead to a framework focused on end-of-life management and an inefficient diversion system. This has stalled progress in resource recovery and waste reduction.

In Ontario, there are a number of successful recycling programs. The Blue Box program – an internationally recognized recycling program – is available in 95 per cent of households and keeps approximately 66 per cent of residential printed paper and packaging from landfills. The Green Bin program, pioneered by municipalities, keeps food and yard waste from landfill and is available to more than half of Ontario households.

Since 2002, Ontario has also put in place a number of waste diversion programs, including programs to manage household hazardous materials, used tires and electronics, in addition to Blue Box programs. Together, these programs divert one million tonnes each year from landfills. These accomplishments

A Circular Economy is

an economy in which participants strive to:

- minimize the use of raw materials;
- maximize the useful life of materials and other resources through resource recovery; and
- minimize waste generated at the end-of-life of products and packaging.

Resource Recovery

means the extraction of useful materials or other resources from things that might otherwise be waste, including through reuse, recycling, reintegration, regeneration or other activities.

Source: Resource Recovery and Circular Economy Act, 2016

were achieved through significant investments and innovation in service delivery and infrastructure.

This strategy provides the roadmap for Ontario to close the resource loop and transition to a system where valuable resources are recovered from the waste stream. This approach is a practical and progressive way to ensure the effective use of our resources, which is critical to an Ontario where strong environmental protection underlies a sustainable and strong economy.

Our Foundation for a Circular Economy

We have a new framework for recovering resources and reducing waste in Ontario.

To support a shift toward a circular economy, Ontario passed the Waste-Free Ontario Act, 2016. It enacted two acts: the Resource Recovery and Circular Economy Act, 2016, and the Waste Diversion Transition Act, 2016.

Under the new legislation, the province is moving toward a circular economy framework by establishing a producer responsibility regime. Combined with new and existing tools, such as those under the Environmental Protection Act, we are setting a strong foundation to transform the way Ontarians think about waste.

The Resource Recovery and Circular Economy Act, 2016, establishes the outcomes-based producer responsibility regime. This act:

1. identifies the provincial interest in resource recovery and waste reduction to provide overarching government direction
2. establishes full producer responsibility by making producers environmentally accountable and financially responsible for recovering resources and reducing waste associated with their products and packaging

3. establishes the Resource Productivity and Recovery Authority to operate the Resource Productivity and Recovery Registry (i.e. data clearinghouse) and oversee producer performance by conducting compliance and enforcement activities

In implementing the Resource Recovery and Circular Economy Act, 2016, Ontario will consider end-of-life materials as resources rather than waste, which will result in fewer raw materials being used and the production of long-lasting and reusable goods. This brings more opportunities to businesses and provides an incentive for future investment.

Through regulations, the government will establish outcome-based requirements that producers will have to meet, such as reduction, reuse and recycling targets, service standards and promotion and education requirements. This and promotion and education supports competition and provides opportunities for businesses to compete in an open and fair marketplace.

Producers have a range of options in deciding how they will comply with regulatory requirements that will be set out in the regulations. A producer may choose to fulfil its obligations individually by finding innovative ways to reduce material use, develop reusable products, or manage materials at their end-of-

Who Are Producers?

Producers are brand holders and/or others with a commercial connection to designated products and packaging in Ontario, such as first importers, wholesalers, retailers and e-tailers.

Municipal integrated waste management system

Ontario's municipalities deliver an integrated waste management system, collecting, processing, marketing and disposing of 4.9 million tonnes of material per year. Statistics Canada estimates that in 2012, Ontario municipalities spent \$1.2 billion to manage waste.

This integrated waste management system recovers 900,000 tonnes of printed paper and packaging; 18,000 tonnes of hazardous material and 900,000 tonnes of organic waste annually.¹²

Transforming Ontario into a Leader

life by recycling and reintegrating them into the economy without disposal.

The province recognizes that education and awareness are essential to changing people's traditional views about waste, influencing Ontarians' lifestyle choices and supporting their efforts in resource recovery. Under the new legislative framework, producers will be required to meet promotion and education standards to engage Ontarians.

Convenient and accessible community services are also essential to support participation in resource recovery and waste reduction. The province will set convenient and accessible consumer service standards related to waste collection and recycling across the province, including urban, rural and northern communities.

New mechanisms to support this shift will be developed using an evidence-based approach, with extensive consultation with our valued stakeholders.

Producers may also decide to work together to meet producer responsibility requirements, including by aligning efforts across multiple provinces.

The Waste Diversion Transition Act, 2016, will facilitate a seamless transition from the current waste diversion programs to the new producer responsibility framework. Existing waste diversion programs will continue operating until the wastes under those programs are designated under the

Resource Recovery and Circular Economy Act, 2016. Once requirements under the new act come into force, existing programs and the industry funding organizations that operate them will be eliminated.



Source: National Inventory Report 1990–2014: Greenhouse Gas Sources and Sinks in Canada, Part 3, Environment and Climate Change Canada

Our Strategy to Achieve a Circular Economy

For Ontario to thrive, it must take advantage of resource recovery and waste reduction as economic drivers and factors in environmental protection. Building on our new foundation, the following outlines Ontario's strategy to achieve its transformation to a circular economy.

Vision

The vision for Ontario is one where waste is seen as a resource that can be recovered, reused and reintegrated to achieve a circular economy.

Goals

The goals are to achieve a **zero waste** Ontario and **zero greenhouse gas emissions** from the waste sector.

Zero waste Ontario is a visionary goal that provides the guiding principles needed to work toward the elimination of waste. It is a new approach that focuses on preventing waste in the first place rather than relying on traditional end-of-life waste management solutions.

The visionary goal of **eliminating greenhouse gases from the waste sector** will guide our priorities for resource recovery and waste reduction. It will help the province meet its climate change commitments and build a low-carbon economy while protecting Ontario's natural environment.

Achieving our goals will require a fresh approach to waste management and resource recovery – one that accounts for the shifting global context, recognizes the opportunities in a circular, low-carbon economy and enlists the support of all Ontarians. New product design and management thinking will help Ontario avoid the volume and toxicity of waste materials, while conserving and recovering resources.

Ontario's resource recovery and waste reduction priorities focus on reducing, reusing, recycling and reintegrating materials into the economy. *Although energy from waste and alternative fuels*

To mark our progress and keep on track, we have set three interim goals:



are permitted as waste management options, these methods will not count towards diversion in Ontario. The recovery of nutrients, such as digestate from anaerobic digestion, is considered diversion.

The first four years of this strategy are dedicated to establishing the foundation for this fundamental shift and transforming the current system. Building on a strong foundation, we anticipate significant progress in the years to come.

Objectives and Actions to Achieve Ontario's Vision

Enhance Provincial Direction and Oversight

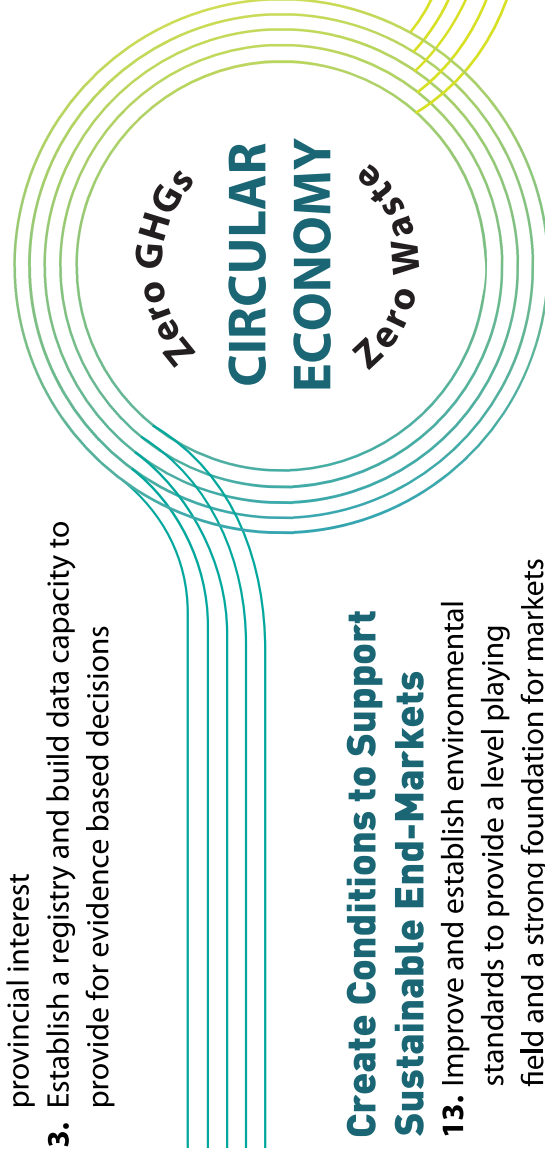
1. Empower the Resource Productivity and Recovery Authority
2. Issue policy statements to provide clear direction on the provincial interest
3. Establish a registry and build data capacity to provide for evidence based decisions

Create Conditions to Support Sustainable End-Markets

13. Improve and establish environmental standards to provide a level playing field and a strong foundation for markets
14. Use green procurement practices to build market demand for recovered materials
15. Implement disposal bans to direct materials to end-markets

Enable Efficient and Effective Recovery Systems

4. Transition existing waste diversion programs to new producer responsibility framework without disruption of services
5. Amend the 3Rs Regulations to increase resource recovery across all sectors
6. Establish service provider requirements to protect the environment while promoting resource recovery
7. Ensure landfills are well planned and managed to minimize their need and reduce greenhouse gas emissions
8. Establish promotion and education requirements to support public participation in resource recovery

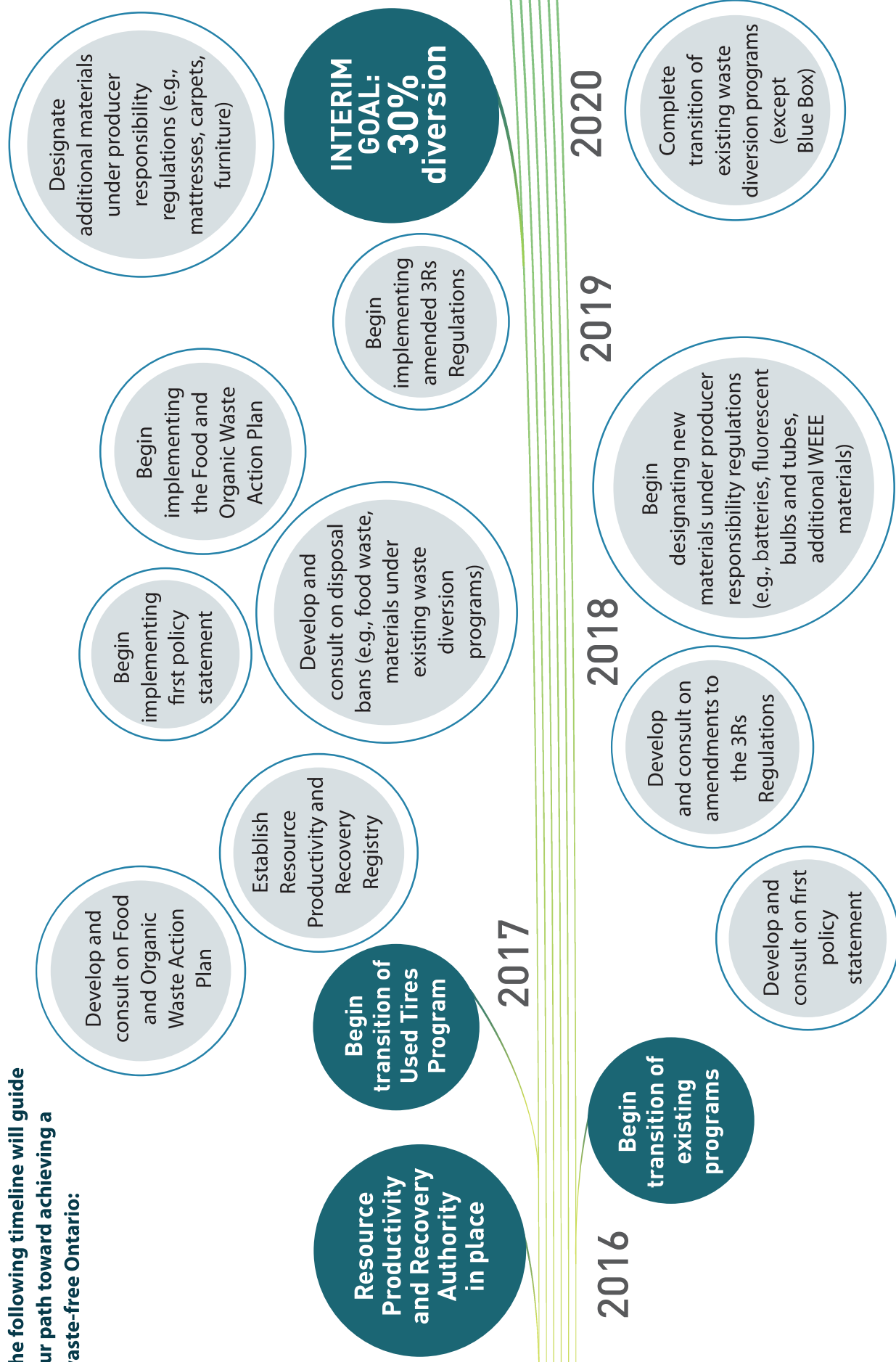


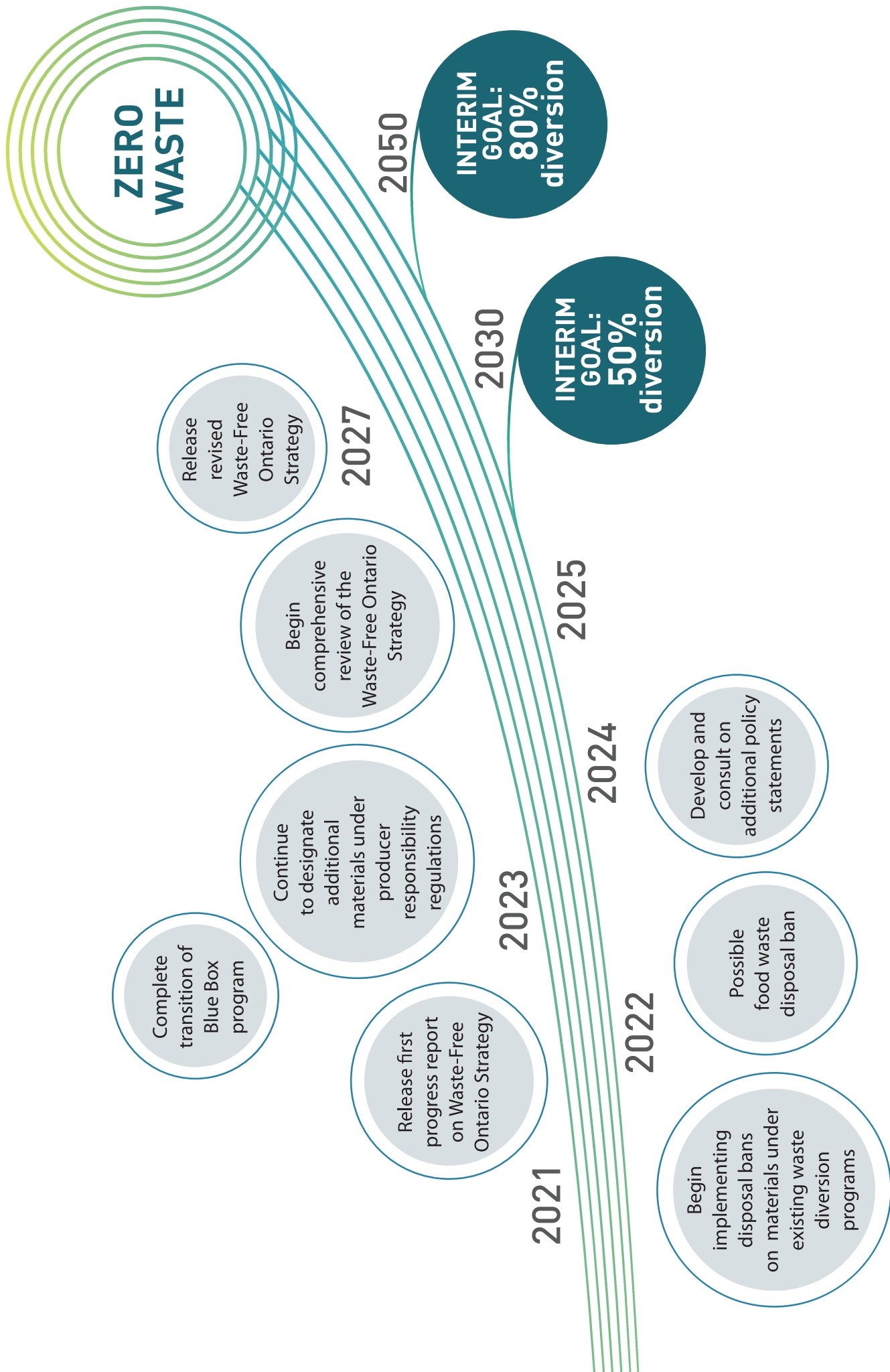
Increase Waste Reduction and Resource Productivity

9. Designate new materials to ensure producers are fully responsible for recovering more materials from products and packaging
10. Implement an action plan to reduce the volume of food and organic wastes going to landfill
11. Implement an Excess Soil Management Policy Framework to increase the reuse of excess soil, while protecting human health and the environment
12. Adopt and implement modern regulatory approaches to build on and promote innovative best practices

Transforming Ontario into a Leader

The following timeline will guide our path toward achieving a waste-free Ontario:





B. Actions Towards a Waste-Free Ontario

Objective 1: Enhance Provincial Direction and Oversight

In order to move toward our visionary goals of zero waste and zero greenhouse gas emissions from the waste sector, we will need to know how to get there. For the shift to a waste-free Ontario will require transformation and sustained leadership through broad, cross-cutting direction. This direction is critical for communicating requirements, priorities, goals, principles, best practices and desired outcomes.

We will also need to enhance oversight in resource recovery and waste reduction systems. Under the previous framework, the Waste Diversion Act, 2002, Waste Diversion Ontario was responsible for overseeing waste diversion programs operated by industry funding organizations but often had challenges fulfilling their oversight role because of a lack of enforcement tools. This has been addressed in the new producer responsibility system.

To provide strong leadership, the government will need to better understand what is needed to build a circular economy in Ontario. Data gathering, analysis and communication will help us understand how far we have come and what else is needed to achieve our goals in order to make better evidence-based decisions in support of achieving our goals.

Action 1: Empower the Resource Productivity and Recovery Authority

To enhance oversight within the new producer responsibility system, the province overhauled Waste Diversion Ontario into the Resource Productivity and Recovery Authority (the Authority), a non-Crown, not-for-profit organization. The Authority oversees producers' performance under the new producer responsibility regime and the operation of existing waste diversion programs until they are transitioned to the new producer responsibility regime.

Key functions of the Authority include operating a public-facing registry – a data clearinghouse – with information and data related to resource recovery and waste reduction, as well as conducting compliance and enforcement activities.

The legislation provides the Authority with the tools for a graduated method of ensuring producer compliance with regulated requirements and a fair system that discourages

non-compliance and prevents free-riders. Compliance and enforcement tools include inspection powers, the power to issue compliance and administrative penalty orders and the ability to conduct investigations.

To operate the data clearinghouse, the Authority will collect information from responsible producers through registration and reporting. The intent is for the Authority to have the necessary data from the regulated community to effectively monitor and assess producers' performance.

The Authority will also be able to collect data related to resource recovery and waste reduction activities from municipalities, generators and service providers. The data will help the government make informed policy decisions, and help municipalities and businesses plan their resource recovery efforts.

Action 2: Issue policy statements to provide clear direction on the provincial interest

The Resource Recovery and Circular Economy Act, 2016, establishes that it is in the provincial interest to have a system of resource recovery and waste reduction with a number of underlying aims. These aims were considered in the development of this strategy and are aligned with its goals, objectives and actions.

The underlying aims of the provincial interest are to:

- protect the natural environment and human health
- foster the continued growth and development of the circular economy
- minimize greenhouse gas emissions resulting from resource recovery activities and waste reduction activities
- minimize the generation of waste, including waste from products and packaging
- increase the durability, reusability and recyclability of products and packaging

- hold persons who are most responsible for the design of products and packaging responsible for the products and packaging at the end of life

- decrease hazardous and toxic substances in products and packaging

- minimize the need for waste disposal

- minimize the environmental impacts that result from resource recovery activities and waste reduction activities, including from waste disposal

- provide efficient, effective, convenient and reliable services related to resource recovery and waste reduction, including waste management services

- increase the reuse and recycling of waste across all sectors of the economy

- increase opportunities and markets for recovered resources

- promote public education and awareness with respect to resource recovery and waste reduction

- promote cooperation and coordination among various persons and entities involved in resource recovery activities and waste reduction activities

- promote competition in the provision of resource recovery services and waste reduction services

- foster fairness for consumers

To provide further provincial direction on the matters of the provincial interest, the Minister of the Environment and Climate Change can issue policy statements. When undertaking activities related to resource recovery and waste reduction, provincial ministries, producers, municipalities, the Authority, and waste service providers will need to *have regard* to the provincial interest and will need to be *consistent* with any applicable resource recovery and waste reduction policy statements.

Policy statements are intended to advance the provincial interest and provide clear policy direction that will help further resource recovery and waste reduction efforts in Ontario. They will also help coordinate decision-making across private and public sectors, where cooperation is integral to achieving resource recovery and waste reduction outcomes.

Policy statements may be used to provide policy direction on issues of broad importance across the production chain, guidance that applies to a wide range of actors or interests, or direction on emerging issues of concern to the province, municipalities or the private sector.

Actions Towards a Waste-Free Ontario

This approach will enable the province to provide overarching policy direction on the whole spectrum of resource recovery and waste reduction issues. For example, policy statements could be used to provide consistent direction to help:

- direct applicable parties to take appropriate actions in reducing and recovering materials
- guide the collection, reuse and recycling of materials
- establish criteria and principles to facilitate sustainable packaging
- guide reusing and recycling methods
- implement efficient and effective approvals processes at both the provincial and municipal levels

Policy statements will be developed using an evidence-based approach, with extensive consultation, including posting on the Environmental Registry and collaboration with stakeholders.

Ontario will begin to develop and consult on the first policy statement, focused on reducing and recovering food and organic wastes, in the fall of 2017.



Action 3: Establish a registry and build data capacity to provide for evidence-based decisions

Provincial leadership depends on reliable data as the foundation for providing evidence-based direction.

The province currently has gaps in knowledge and data regarding resource recovery and waste reduction throughout the product life cycle, including the complexity of managing end-of-life of products and packaging, the materials that require greater effort and the performance of sectors in recovering resources and reducing waste.

Filling these knowledge gaps through comprehensive data and sound performance metrics is critical to building a better understanding of environmental and economic conditions and assessing policy and program needs. More specifically, better data will help to:

- assess the current state of resource recovery and waste reduction and future needs
- understand where opportunities exist to recover resources and increase waste reduction

- determine whether environmental standards are being met
- improve our understanding of the composition of the regulated community
- improve our understanding of the costs and benefits of resource recovery
- evaluate and assess our performance against targets

This is especially important in the industrial, commercial and institutional (IC&I) sectors, where there is not enough data to confirm the extent of current waste reduction, reuse and recycling efforts and no one-size-fits-all model to drive diversion. Better data is needed to understand which approaches work best and to make informed evidence-based decisions.

The province will fill data gaps by:

- requiring the Resource Productivity and Recovery Authority to establish a data clearinghouse (i.e. a registry) and collect important data from producers and other parties that conduct activities related to resource recovery and waste reduction (e.g., generators, service providers and municipalities). These efforts will help the province effectively set targets and develop policies while the Authority monitors and assesses producer performance

- requiring the Authority to make data available to the public through its public-facing registry in accordance with any prescribed requirement
- enhancing data collection, reporting and performance measurement from generators and service providers
- better coordinating data-related measures across existing provincial approvals and requirements
- identifying measures to better assess business-to-business diversion
- working with other stakeholders, including municipalities, industry associations, and not-for-profit groups to explore voluntary data sharing agreements, such as sharing data with the waste industry on current landfill sites and disposal capacity in Ontario

The province will consult in advance of regulating data collection requirements to ensure that appropriate data is collected. Data reporting, including how it is managed and collected, will take into account the unique nature of different economic sectors and waste activities.

The province will also consult on potential mechanisms to collect and assess data, including regulatory requirements. New reporting initiatives will allow for adequate lead time for businesses

Actions Towards a Waste-Free Ontario

and affected parties to implement data collection measures and build on existing private sector financial and reporting cycles.

Ontario recognizes the importance of balancing information transparency and protecting confidential business information. The Resource Productivity and Recovery Authority will operate an online, public-facing registry for data collection and will be subject to confidentiality of information provisions in the Resource Recovery and Circular Economy Act, 2016, and the Waste Diversion Transition Act, 2016, when it exercises its powers and duties.

Under the Resource Recovery and Circular Economy Act, 2016, the Authority is required to provide certain information to the Minister upon request, including information collected under the Resource Recovery and Circular Economy Act, 2016, or the Waste Diversion Transition Act, 2016. The ministry is subject to the Freedom of Information and Protection of Privacy Act. The act includes provisions to protect information that could reveal trade secrets or scientific, technical, commercial, financial or labour relations information supplied in confidence.



Objective 2: Enable Efficient and Effective Recovery Systems

As we move toward full producer responsibility and a zero waste future, we need to make sure that we have the necessary building blocks in place for an efficient and effective resource recovery system that will save taxpayers money, reduce emissions from waste and reduce costs for companies and consumers, all while protecting environmental and human health. We also need to strengthen generator responsibility as set out under the Environmental Protection Act.



Action 4: Transition existing waste diversion programs to new producer responsibility framework without disruption of services

In order to move toward a circular economy and address the challenges the province faces, existing waste diversion programs will undergo a transition process that consists of two concurrent steps:

1. winding up existing waste diversion programs and industry funding organizations under the Waste Diversion Transition Act, 2016
2. putting in place regulations under the Resource Recovery and Circular Economy Act, 2016, to make producers fully responsible for the materials under the existing programs

To ensure a seamless transition, the new producer responsibility regulations will be fully implemented on the day the existing waste diversion programs wind up.

Under the Waste Diversion Act, 2002, four waste diversion programs were developed and operated by three industry funding organizations:

1. Blue Box operated by Stewardship Ontario
2. Municipal Hazardous or Special Waste (MHSW) operated by Stewardship Ontario
3. Waste Electrical and Electronic Equipment (WEEE) operated by Electronic Stewardship
4. Used Tires operated by Ontario Tire Stewardship

As well, four Industry Stewardship Plans have been approved under the Waste Diversion Act, 2002:

1. Used Paints and Coatings
2. Pesticides, Solvents and Fertilizers
3. Automotive Materials Stewardship
4. Soda Stream



Transitioning each of these waste diversion programs to the full producer responsibility regime will be guided by the following core principles:

- the government will lead the transition process
- each waste diversion program will be directed by the Minister to transition in a manner that effectively addresses the unique circumstances of each program
- Ontarians' experience with and access to existing services will not be negatively impacted, such as curbside collection of Blue Box materials
- transition will promote competition and a level playing field in the marketplace
- all stakeholders will be extensively consulted and engaged in the process

Clear responsibilities will ensure everyone knows their role

The government will lead the overall transition process, including directing the wind-up of waste diversion programs and industry funding organizations and developing regulations to set the new producer responsibility requirements for materials included in the existing programs.

Alcohol and Beer Containers

There are over 900 locations across Ontario where empty alcohol and beer bottles can be returned for a deposit refund.

In 2015-16, the Beer Store recovered more than 95 percent of all refillable beer bottles sold in Ontario – these bottles are reused an average of 15 times before being recycled into new glass bottles. Reusing a bottle means less virgin glass is required to produce new products and saves energy in the process. The Ontario Deposit Return Program recovered 79 per cent of all wine, spirits and non-Beer Store listed beer containers in that same period, including more than 80 per cent of glass bottles and cans.

Together, the Beer Store and the Ontario Deposit Return Program avoided more than 200,000 tonnes of greenhouse gas emissions in 2015-16 – equivalent to taking more than 40,000 cars off the road.

(Source, Working Together for a Greener Tomorrow: Beer Store Responsible Stewardship. The Beer Store, 2015-16)

Before the existing waste diversion programs and the industry funding organizations that operate them are wound up, regulations will be developed under the new producer responsibility regime to identify responsible producers, designate materials and set clear regulatory requirements for those responsible producers and set clear timelines for when the new obligations take effect.

As directed by the Minister of the Environment and Climate Change, each industry funding organization will work with stakeholders to develop a wind up plan for their programs. Wind up plans will deal with the assets, liabilities, rights and obligations of the existing programs and industry funding organizations. Once assessed and approved by the Authority, industry funding organizations will be responsible for the implementation of the plans. Industry funding organizations will be expected to wind up operations in accordance with approved wind-up plans and in accordance with the Minister's wind up direction. Industry funding organizations will continue to operate existing waste diversion programs until the new producer obligations take effect.

To prepare to meet their obligations under the new producer responsibility regime, producers will be required to register with the Authority and will negotiate agreements with municipalities or service providers as needed to enable them to meet their obligations individually, collectively or through third-party service delivery.



Actions Towards a Waste-Free Ontario

Existing programs under the Waste Diversion Transition Act, 2016, will end on the transition date set out in the approved wind-up plans. On the same date, producers will need to launch their own programs to meet applicable requirements under the Resource Recovery and Circular Economy Act, 2016 and its regulations. After program wind-up is complete, responsible industry funding organizations will be expected to wind themselves up in accordance with the approved wind up plans and regulations once they are developed. This will help ensure no disruption to services for Ontarians.

Stakeholders will be consulted at all stages of the transition process

Extensive consultation with producers (e.g., stewards), municipalities, the Authority, waste reduction service providers, industry funding organizations and the public will help determine when and how to transition the existing programs. Consultations will include consideration of:

- potentially stranded assets and liabilities of programs, industry funding organizations and/or municipalities
- timelines for wind-up of programs and industry funding organizations
- material-specific regulatory requirements, such as resource recovery and waste reduction

- requirements, accessibility requirements, promotion and education requirements
- how producers anticipate achieving their obligations under the legislation (e.g., likelihood of individual vs. collective approaches)
- data reporting and verification, data transparency, competition and fairness in the market place, burden reduction considerations
- how collection and management challenges can be addressed in rural and northern communities
- how transition can make best use of existing public promotion and education efforts, to ensure consumers are aware of the programs being transitioned and continue to participate in resource recovery activities

Blue Box transition requires collaboration among all relevant parties

To help ensure services are maintained, Blue Box program transition will require careful consideration. Cooperation among municipalities, producers, the Authority and Stewardship Ontario will be essential to ensure a smooth transition to the new producer responsibility approach. Considerations for consultation on the Blue Box program transition could include:

- roles and responsibilities for the operation of the Blue Box system
- opportunities for municipal integrated waste management systems to support producer responsibility
- how to address municipal contracts and assets, including existing contracts for collection and post-collection management and how to avoid stranded assets
- opportunities to harmonize materials collected across Ontario and the type of collection activities that are undertaken
- opportunities to lower overall costs through greater harmonization in the collection and post-collection management
- the status of Regulation 101/94 under the Environmental Protection Act, which currently requires every municipality with a population of at least 5,000 residents to operate a Blue Box waste management system, prior to and after transition

It is anticipated that the transition of the Municipal Hazardous or Special Waste, Waste Electrical and Electronic Equipment and Used Tires programs will be completed within two-to-four years of release of this strategy, with Used Tires as the first. Transitioning the Blue Box program may take longer as the province, municipalities and producers will need to have extensive discussions on the transition process.

Action 5: Amend the 3Rs Regulations to increase resource recovery across all sectors

Ontario's industrial, commercial and institutional (IC&I) sectors, including construction and demolition, divert just over 13 per cent of their wastes.¹³

Ontario Regulations 102/94 (Waste Audits and Waste Reduction Work Plans), 103/94 (Industrial, Commercial and Institutional Source Separation Programs) and 104/94 (Packaging Audits and Packaging Reduction Work Plans) made under the Environmental Protection Act, commonly known as Ontario's 3Rs Regulations, govern the IC&I sectors. Businesses view the three regulations as the policy framework for waste generator responsibility.

Ontario Regulations 102/94 and 103/94 require large IC&I establishments (e.g., hospitals, restaurants, and offices) to identify the amount and types of waste they generate, develop waste reduction work plans, separate certain wastes at source and make reasonable effort to ensure that separated wastes are sent for reuse or recycling. Ontario Regulation 104/94 requires manufacturers, packagers and importers to audit their packaging practices and develop packaging reduction plans.

The 3Rs Regulations also require multi-residential dwellings of six or more units to source separate recyclable wastes. Improving resource recovery from high-rise and other multi-residential dwellings is important as we continue to develop more compact communities.

Now more than 20 years old, the 3Rs Regulations no longer adequately drive waste diversion. Their requirements are limited to large establishments and only select waste materials and require only "reasonable efforts" to send source-separated wastes for recycling or reuse.

There is potential for much greater diversion in the IC&I sectors. The province will convene a stakeholder working group for advice on amending the 3Rs Regulations and help drive diversion.

Amendments will consider matters related to:

- data gathering from regulated sectors
- scope of the regulated sectors, size thresholds for facilities and dwellings and designated materials
- appropriate outcomes for sectors and subsectors
- reporting and tracking requirements with transparency through public reporting
- third-party monitoring, certification and audits

- the role of promotion and education in improving IC&I diversion rates
- performance measures that could be used to increase diversion
- greater use of new technology and reduction in administrative burden
- implications of Ontario's growth management policy
- how to increase diversion in multi-residential buildings
- exploration of complementary tools, such as producer responsibility and disposal bans, to recover resources and reduce waste



Action 6: Establish service provider requirements to protect the environment while promoting resource recovery

Owners and operators of waste management systems and waste disposal sites provide waste management services to municipalities and businesses.

Requirements for these service providers, including the requirement to obtain Environmental Compliance Approvals for waste management, including hauling, storage, processing, recycling, diversion and disposal, are set out in the Environmental Protection Act and its regulations.

Imposing regulatory requirements on owners and operators of waste management systems in a consistent and measured way helps protect the natural environment and ensures there is a level playing field among service providers to support competitive markets.

The province will consider enhancing regulatory requirements, including any applicable requirements for service providers to support the implementation of producer responsibility under the Resource Recovery and Circular Economy

Act, 2016. Enhancements to the regulatory requirements will also be considered during broader reviews of the 3Rs Regulations and during the development of our path forward on food and organic wastes. The province wants to ensure that resources are being recovered from the waste stream in an effective and efficient manner and in a way that does not lead to significant negative impacts on the natural environment.

To ensure a level playing field for service providers, the province will consider:

- adopting or promoting national, international and industry standards
- developing provincial standards (e.g., recycling standards)
- enhancing reporting, compliance and enforcement
- reviewing existing standards to reduce administrative or regulatory burden and facilitate resource recovery
- third-party monitoring, audits and transparency with public reporting
- a modern regulator approach to enhance service provider accountability, supported by compliance monitoring and enforcement. This will include:

- reviewing existing standards, approval requirements and regulations with an eye to reduce administrative or regulatory burden on service providers in order to facilitate resource recovery
- third-party monitoring, audits and transparency with public reporting
- modern regulatory initiatives to support emerging technology, innovation and streamlined approval processes

End-of-Life Vehicles Standards

End-of-life vehicles may contain potentially hazardous substances. Not managing waste properly now can lead to expensive cleanups of contaminated land and water in the future. To support waste diversion and environmental protection, Ontario implemented new regulations to standardize the management of end-of-life vehicle processing sites in the province, including new requirements (Regulations 85/16 and 86/16) related to depollution, waste storage, training and record keeping. These regulations help ensure end-of-life vehicle processing and associated wastes are managed in an environmentally responsible manner.

Action 7: Ensure landfills are well planned and managed to minimize their need to reduce greenhouse gas emissions

In an economy that values its resources and promotes the efficient and effective recovery of products and packaging, landfills should be the last resort in the system to manage waste materials. This is not currently the case in Ontario, as over 70 per cent of products at their end-of-life, packaging and other waste is sent to landfill.¹⁴

Ontario has approximately 850 operating landfills¹⁵ and 1,525 closed landfills.¹⁶ Given the projected population growth and economic trends, our ability to dispose of waste will become increasingly challenging. Without reducing the amount of waste generated, it is forecasted that Ontario will need to site 16 new or expanded landfills by 2050.¹⁷

While Ontario strives for a waste-free future, there will still be a need for landfill space as we work towards this goal. The province will look for innovative ways to reduce the impact landfills have on the environment and slow the number of landfills needed within the next two decades. The province will also take actions, in conjunction with its transition to a low-carbon economy, to

decrease greenhouse gas emissions from both new and existing landfills.

Approximately six per cent of Ontario's total greenhouse gas emissions come from the waste sector – 90 per cent of this is from landfill – and this number is increasing.¹⁸ This gas is primarily methane generated by decomposing organic waste, which has a global warming potential 25 times greater than carbon dioxide (CO₂).¹⁹ If Ontario is to seriously tackle climate change and make progress on the Climate Change Action Plan, preventing greenhouse gas emissions from landfill must be a priority.

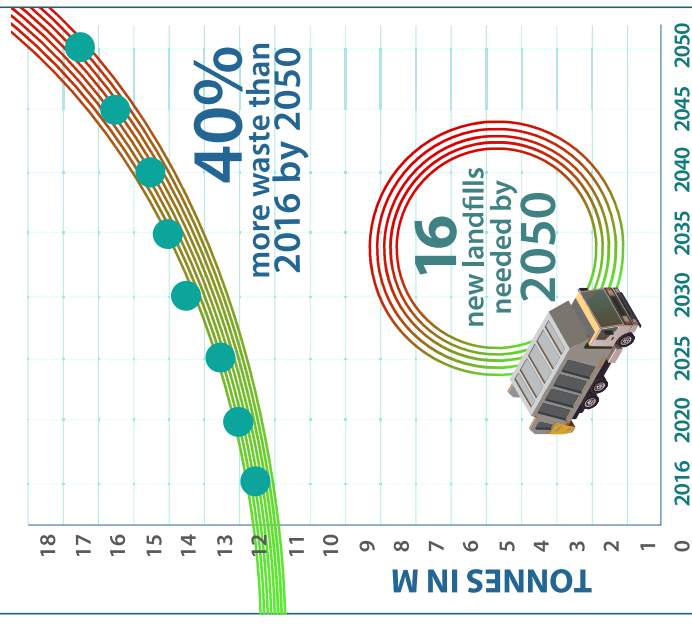
Ontario already has mandatory landfill gas controls set out in regulation to capture methane from all new or operating landfills larger than 1.5 million cubic metres. Using the methane from landfills to produce electricity or other energy will provide benefits for homeowners and businesses.

A number of landfill sites are already taking advantage of this process. Ontario's Climate Change Action Plan will also consider offset credits for projects that effectively reduce or remove greenhouse gas levels in the environment, including protocol development for landfill gas capture. Creation of offset credits will be based on criteria set in offset project protocols developed with Quebec.

The province will encourage actions to capture and use this resource and consider the role

Historical and Projected Waste Generation in Ontario

This chart depicts what could happen if waste continues to go to landfill at the current rate.



Estimate of new landfills needed based on current waste generation, diversion and waste exports and landfill capacities of the largest landfills in Ontario.



Methane Capture

Currently, 31 landfills in Ontario have systems in place to capture landfill gas, which are expected to reduce total greenhouse gas emissions by 1.8 megatonnes by 2020.²⁰

- the service area and types of wastes to be accepted at the site to reduce greenhouse gas emissions and protect the environment
- the application of best management practices related to achieving environmental standards and maximizing the capture of methane emissions

Ontario will continue to be a leading jurisdiction in setting strict landfill standards and requirements. This means continuing to safeguard drinking water by applying groundwater protection limits and design requirements for leachate collection systems that are unsurpassed by any other jurisdiction in North America. Proposals for large new landfills and landfill expansions will continue to be subject to rigorous environmental assessment processes under the Environmental Assessment Act and strict requirements for design, operation, closure, post-closure care and financial assurance under the Environmental Protection Act. These comprehensive requirements will ensure the environmental risks of this landfilling legacy will be managed.

that landfills can play in supporting cleaner, renewable electricity and natural gas supplies. We will consult with stakeholders on planning for future landfills and the efficient management of existing landfills, including the benefits of promoting or expanding methane capture.

The provincial approach to future waste disposal needs will be informed by reliable data. The province has partnered with the waste management sector to ensure landfill data, such as landfill capacity, supply, size, location, service areas, types of wastes to be accepted at the site and environmental protection features supports evidence-based decision-making.

Ontario will ensure proposals for new landfills or landfill expansions include a rigorous review of:

- the need to avoid over-supply of landfill capacity
- the location in relation to environmentally-sensitive areas and nearby communities

Action 8: Establish promotion and education requirements to support public participation in resource recovery

Promoting and improving public participation in resource recovery and waste reduction is an important part of ensuring our resource recovery systems operate efficiently and effectively.

Provided with the right information, Ontarians can choose goods that are more durable, more recyclable or have less of an impact on the environment and drive the market for these goods with their purchasing power. Information about best practices can also help Ontarians better manage end-of-life products and packaging to generate less waste.

Waste generators in the IC&I sectors will benefit from knowledge about business-to-business markets for waste materials and the role source separation can play in reducing disposal costs.

Under the Resource Recovery and Circular Economy Act, 2016, the Authority is required to establish a registry to post relevant data and information and allow the public to access it as appropriate.

The government will also establish promotion and education requirements for producers to ensure consumers get the information they need to properly participate in resource recovery efforts.

The role generators and service providers play in public education and awareness will also be considered. For example, as part of amendments to the 3Rs Regulations, we will consider how generators and service providers can improve awareness efforts to drive larger volumes of waste to diversion.

The province will consider how promotion and education needs may need to be customized to maximize resource recovery and waste reduction in multi-residential developments, the industrial, commercial and institutional sectors and in different community types, such as urban, rural and northern communities.

The province will also look for other complementary measures to drive greater public participation in resource recovery, including tools to promote behavioural change, such as standardized waste receptacles.



Objective 3: Increase Waste Reduction and Improve Resource Productivity

Resource recovery and waste reduction contribute to economic development and job creation in a variety of ways. If we are to build a circular economy and reap its benefits, it is critical that we minimize raw material use maximize reuse of products and packaging and recycle a wider range of materials.

Residences, industrial facilities, commercial establishments and institutions generate a wide variety of wastes. Paper and packaging, food and organic wastes, and construction and demolition materials are three large waste streams that require extra effort and targeted action.

Ontario will use a variety of tools and take actions to incent businesses to show leadership. We will demonstrate efforts to increase resource productivity by reducing the use of raw materials and avoiding waste to maximize the recovery of materials at their end-of-life.

Action 9: Designate new materials to ensure producers are fully responsible for recovering more materials from products and packaging

The province will designate new materials under the new producer responsibility regime. When identifying potential candidate materials for full producer responsibility, the province will consider products and packaging whose recovery helps fulfil one or more of the following three broad results:

- recovering high-volume resource streams to increase diversion
- keeping hazardous materials out of landfills to protect our environment
- reducing domestic and global greenhouse gas emissions to fight climate change

The province will assess candidate materials against specific criteria to determine their suitability for producer responsibility in Ontario.

Criteria to determine new materials under the producer responsibility regime may include:

- environmental and economic opportunities, including the viability of existing or potential end-markets
- infrastructure capacity, both existing and forecasted
- costs and benefits, including cost efficiency and program effectiveness
- the effectiveness of ongoing diversion initiatives, including voluntary industry approaches, third-party efforts and the success of generator responsibility regimes
- the experience of other jurisdictions, both in Canada and abroad
- harmonization with existing national and international efforts
- industry or sector interest in implementing producer responsibility
- alignment with other jurisdictions and/or the 2009 Canadian Council of Ministers of the Environment Extended Producer Responsibility Action Plan

The province recognizes not all materials are suitable for producer responsibility. To inform our decisions and help ensure appropriate materials are designated, the province will work with producers, municipalities, service providers and other stakeholders to gather and assess data. Properly identifying products and packaging is essential to an effective regulatory framework and efficient approaches to resource recovery.

Ontario will also consider how the transition from existing waste diversion programs to the new framework could facilitate or impede the recovery of newly designated materials for producer responsibility, including the ability of producers to manage obligations under both processes.

Materials will be designated through regulations made under the Resource Recovery and Circular Economy Act, 2016. Based on previous consultations, the first set of materials will include, but is not limited to:

- small appliances
- electrical tools
- batteries
- fluorescent bulbs and tubes
- mattresses
- carpets

- clothing and other textiles

- furniture and other bulky items

Producer responsibility and generator requirements could complement each other in some circumstances. This is of particular interest for paper and packaging, which accounts for about 55 per cent of waste generated.²¹ Many generators in the IC&I sectors are already subject to regulatory requirements for the end-of-life management of paper and packaging under the Environmental Protection Act. While some companies have made significant effort and achieved good results, overall diversion rates for paper and packaging in the IC&I sectors remain low at 26 per cent.²²

The province will consult with stakeholders on how to determine the best approach to increase diversion for paper and packaging in the IC&I sectors. Consultation is critical to ensuring products and packaging are designated in an order and timeframe that sets a foundation for progress and allows producers, consumers, municipalities and waste service providers to successfully adjust to the new approach.



Action 10: Implement an action plan to reduce the volume of food and organic wastes going to landfill

Food and organic wastes makes up approximately one-third of Ontario's waste stream.²³ This includes organic waste generated at home, such as food waste and leaf and yard waste and the food waste produced by IC&I sectors like food processors, wholesalers, grocery stores and restaurants.

When we send food and organic wastes to landfill, we lose valuable resources that could be used to support healthy soils and opportunities to reduce greenhouse gas emissions, including enhancing soil carbon storage through the use of compost.

Food waste is also about much more than what ends up in the landfill – it represents the resources embedded in food, including energy and water used to grow, harvest, process, transport and sell food and food-related products. About \$31 billion worth of food is wasted in Canada annually.²⁴ Households are responsible for approximately 47 per cent of this food waste. The remaining 53 per cent is generated along the supply chain where food is grown, processed, transported and sold.²⁵

Food and organic wastes also represent a significant threat to our climate change progress. In 2014, Ontario's waste sector was responsible for 9.4 megatonnes of greenhouse gas emissions – approximately six per cent of the provincial total.²⁶ 90 per cent of these emissions came from solid waste disposal in landfills – of which most came from organic waste.²⁷ When food and organic materials are landfilled, they break down and emit methane, a greenhouse gas that is 25 times more harmful to our climate than carbon dioxide.

To address these issues, the province reaffirmed its commitment to develop a plan to reduce the amount of food waste and organic materials going to landfill as part of Ontario's Climate Change Action Plan.

The Food and Organic Waste Action Plan will focus on regulatory and non-regulatory actions and consider how to prevent food from becoming waste and to recover food and organic wastes from the waste stream. In developing the action plan, the province will consider:

- the entire supply chain, including pre-consumer and post-consumer organic wastes
- recovery in high-rise and multi-residential dwellings



- food rescue and donations, while ensuring that donated food products are safe for human or animal consumption
- factors affecting recovery of food and organic wastes on a regional scale, including rural and northern communities
- identification of regional infrastructure capacity and gaps
- data gathering, public reporting and performance measures
- measures to promote a level playing field

Actions Towards a Waste-Free Ontario

- third-party monitoring, audits and transparency through public reporting
- regulatory actions (e.g., source separation requirements, disposal bans)
- non-regulatory measures (e.g., streamlined approvals, consumer, processor and industry best practices)
- cost and benefit analysis, including cost efficiency and program effectiveness

To support markets for recovered food and organic materials, the Food and Organic Waste Action Plan will also consider opportunities for:

- developing new products or supporting existing innovations that use or integrate recovered food and organic materials
- digestate and compost to recover nutrients and improve soil health
- collaboration between government and industry to update regulations and guidelines to reflect new and innovative technologies and promote new processes that support viable end-markets

To support Ontario's Climate Change Action Plan, the Food and Organic Waste Action Plan will also consider:

- performance measures and targets for food and organic wastes, such as the diversion rate targets set out in Ontario's Climate Change

Action Plan of 40 per cent by 2025 and 60 per cent by 2035

- additional targets that may include per capita measures of food and organic materials recovered and disposed
- opportunities to promote the development of renewable natural gas, including introducing a renewable content requirement for natural gas
- the role of carbon offset protocols to support the development of food and organic waste processing infrastructure

When taking actions to address food and organic wastes, the province will aim to build on the many successful voluntary initiatives that are already in place in the municipal and private sectors. The province will also consider cross-cutting issues that affect the agricultural and food processing sectors, such as food safety and biosecurity, when identifying opportunities to increase the recovery and use of recovered materials.

The province has committed to banning food waste from disposal (e.g. landfill, incineration) to increase diversion of these wastes and reduce greenhouse gas emissions. Banning food waste from disposal will require extensive consultation and coordination with our partners and will be implemented once infrastructure capacity is adequately developed.

Addressing food and organic wastes will require coordination among multiple players, including waste generators, retailers, municipalities, service providers and the public.

The province has launched a stakeholder working group that will provide advice on the development of the action plan to ensure unique considerations inherent to food and organic wastes are addressed. The stakeholder working group includes representatives from key interests groups, such as municipalities, retailers, the waste management industry, producers, environmental groups, the agricultural community and generators of food and organic wastes in the IC&I sectors.



Action 11: Implement an Excess Soil Management Policy Framework to increase the reuse of excess soil, while protecting human health and the environment

Excess soil – soil that is not needed on a site after it is excavated – is generated through many economically and socially important activities, such as infrastructure development, and is a valuable resource. It must be managed and moved in ways that protect our health and our environment while promoting its beneficial reuse.

There is currently confusion about what standards apply to the movement of excess soil and when it may be deemed a waste. In the absence of provincial direction on standards for moving excess soil, in many cases, valuable soil resources are currently being treated as waste and sent to landfill. In order to promote the safe and beneficial reuse of excess soil, the province intends to clarify when it can be considered a waste and provide a new approach, including new standards, for the reuse of excess soil.

To support these efforts, the province developed an Excess Soil Management Policy Framework that provides actions the government will

take in fostering more sustainable excess soil management.

The framework recognizes excess soil as a resource and promotes a system that strives for consistency, fairness, enforceability and flexibility. This framework embraces two key goals:

- protect human health and the environment from inappropriate relocation of excess soil
- enhance opportunities for the beneficial reuse of excess soil and to reduce greenhouse gas emissions associated with the movement of excess soil

The framework recognizes the responsibility of the generator of excess soil, or the source site, to plan for its appropriate reuse and to track and record excess soil from source to reuse.

This will be achieved through new regulatory requirements on source sites to prepare and implement excess soil management plans. The framework includes actions to develop technical direction, including new standards for reuse of excess soil, as well as requirements for tracking and registration related to excess soil movements.

Excess soil reuse must be considered earlier in the process of planning for development and infrastructure. As part of the framework delivery, municipalities will be encouraged to develop strategies for reuse of excess soil as part of planning for growth and development.

Clarification and alignment will also be achieved through consideration of potential amendments to existing regulations related to brownfields redevelopment and inert fill as it applies to excess soil, both under the Environmental Protection Act.

Implementation of this framework will also consider new policy tools, such as policy statements under the new waste legislation, and is being informed by advice and input from a multi-ministry team, an Excess Soil Engagement Group and standards, sampling and market support sub-groups.



Action 12: Adopt and implement modern regulatory approaches to build on and promote innovative best practices

As Ontario continues to find new and effective ways of recovering resources, the province will provide an effective and modern outcomes-focused regulatory environment that promotes industrial competitiveness, investment, innovation and growth and harmonization with other jurisdictions.

The province will continue on its path to be a modern regulator by taking advantage of new technology and innovations. We will continue to work towards reducing barriers to adopting new innovative technologies and building an approval system for the future that focuses on environmental outcomes.

Legal requirements related to waste need to align with and promote the concept of a circular economy. They need to reflect increasingly integrated and sophisticated resource recovery operations, including using the best available processes and technology and innovative regulatory best practices.

Developing a risk-based approach for compliance and enforcement will also simplify legal requirements and business processes for activities that are lower risk, less complex or have standard requirements, while continuing to protect the environment and human health. This increases the efficient and effective use of the province's resources while also providing better services and transparency to businesses and the public.

The province will continue to move forward with regulatory modernization efforts by reviewing

existing regulations, policies and approaches, including consideration of developing resource recovery infrastructure and innovative and emerging technologies. This review will be undertaken with a view to building a circular economy that maintains a level playing field, increases the accountability of regulated parties, and aligns with existing and future economic trends and industry and regulatory best practices.



Objective 4: Create Conditions for Sustainable End-Markets

For materials to be recovered and re-integrated into the economy, the cost to recycle must be more viable than the low cost of sending materials to landfill. More emphasis needs to be placed on stimulating the development of markets for these products to help close the resource loop.

Taking action to foster a supportive business environment for companies that use recovered resources in Ontario will help drive additional recycling, create more jobs, reduce greenhouse gases and extend the life of existing landfills.



Action 13: Improve and establish environmental standards to provide a level playing field and a strong foundation for markets

Environmental standards can assist in improving the quality and consistency of recovered materials and can help support end-markets for recovered materials. Standards take many forms – regulatory requirements, guidelines, best practices and certification programs. Standards send signals to the market and influence what materials are recovered, how they are managed and how they are reintegrated into the economy.

The province is considering the role of modern environmental standards in providing greater certainty to markets, leveling the playing field, and supporting producer responsibility, generator responsibility and service provider requirements to increase resource recovery, including:

- innovative, risk-based modern regulatory standards, such as developing environmental activity sector registry regulations for certain sectors, as opposed to obtaining

environmental compliance approvals for such sectors

- adopting national, international and industry standards
- adopting new technologies and best practices
- reviewing existing environmental standards to reduce regulatory burdens
- reviewing the regulatory and policy framework under environmental legislation, such as Regulation 347 under the

Environmental Protection Act, which regulates the management of subject waste (e.g., liquid industrial waste, hazardous waste or specific treated characteristic waste), to align with new thinking about waste and to facilitate reduction, reuse and recycling efforts

The province will consult with stakeholders as it undertakes this shift to identify which types of standards are most appropriate in Ontario and provide for harmonization with other jurisdictions while supporting open, fair and competitive markets.

Action 14: Use green procurement practices to build market demand for recovered materials

Our government has strong procurement policies that encourage and support purchasing green products and services that do not impact the environment.

As we shift to a circular economy, government leadership in procuring goods and services that make use of recovered resources or include recycled content could help stimulate markets for recovered materials.

Some municipalities, universities and schools in Ontario's broader public sector have voluntarily adopted green procurement policies. A number of businesses in Ontario have also implemented policies that consider environmental factors in the procurement of goods and services.

We need to learn more about how our policies, programs and decisions can help send the right signals to shift the market toward greater recovery and reintegration of resources into new products and services.

The government will review its existing procurement policies to ensure procurement rules enable the achievement of government objectives.



Actions Towards a Waste-Free Ontario

Action 15: Implement disposal bans to direct materials to end-markets

Disposal bans have been implemented across the world, including in some Ontario municipalities, to help drive diversion.

The province will use disposal bans to help direct materials to reuse and recycling streams where infrastructure is already in place or drive investment in diversion infrastructure and support the development of end-markets. This is particularly effective when bans are phased in over time.

In assessing the viability of banning particular wastes from disposal and the applicability of

disposal bans to support diversion efforts, the following factors will also be taken into account:

- materials best suited for early disposal bans
- adequate and effective alternatives to disposal
- costs and benefits
- reporting and data requirements
- existing infrastructure capacity and future needs
- roles of producers, generators and service providers in supporting disposal bans and
- innovative, risk-based modern regulatory approaches to compliance and enforcement

The province received feedback on the need to look at disposal bans for certain materials, provided that bans are phased-

in and accompanied by comprehensive implementation plans.

The first materials considered for disposal bans include:

- food waste
- materials designated under existing waste diversion programs
- beverage containers
- corrugated cardboard and some paper materials
- fluorescent bulbs and tubes

Disposal bans can only be effective when consumers are aware of them and have access to means to avoid disposing of the banned materials, such as opportunities to send these materials for reuse, repurposing or recycling.

Promotion, education, consumer convenience and accessibility are critical to the success of any disposal ban.

The province will consult in advance of proposing regulations to disposal bans to determine prospective materials and to address implementation and operational challenges, including the time needed to build capacity and infrastructure, diversion barriers for multi-residential and high-rise buildings and diversion challenges for rural and northern communities.



C. Coordination, Collaboration and Implementation

Stakeholder feedback is critical to ensuring effective policy direction, appropriate performance measures and a coordinated approach to implementing a range of policy tools.

The province is committed to hearing a variety of opinions about the implementation of the tools and actions in the legislation and this strategy. We recognize that the path forward must consider and respect the roles and responsibilities of different parties and the success of existing efforts. We will consult extensively to build on strengths and take a collaborative approach toward reaching our goals.

Effective waste reduction and resource recovery will only occur where tools are used and actions are implemented in a coordinated, integrated and consultative manner that reflects the unique considerations of particular waste streams or sectors.

The province will support municipalities and non-governmental initiatives that contribute to resource recovery and waste reduction. These initiatives are critical to identifying market opportunities, promoting more sustainable technologies and finding new ways to close the resource loop.

Integrated Tools and Coordinated Actions to Achieve Results

Elements of an integrated approach to increase diversion in residential sectors could include:

- producer responsibility to ensure waste reduction, value creation and effective recycling systems
- municipal support through integrated waste management approaches
- service providers to ensure materials are properly managed and recycled

Other examples for increased diversion in IC&I sectors include:

- generator responsibility to ensure appropriate source separation and collection opportunities
- producer responsibility to ensure waste reduction, value creation and effective recycling systems
- service providers to ensure materials are properly managed and recycled

Partnerships can help support existing approaches and promote new ways of recovering resources and finding value in materials that would otherwise end up in landfills. Some materials, such as textiles and household consumer goods, present particular opportunities where linkages among waste generators, waste managers and non-governmental organizations can make great progress toward reducing the volume of waste managed by municipalities and the IC&I sectors.

This innovative work will also set the foundation for the province's transition to a circular, low-carbon economy. Think-tanks, academics, scientists and environmental organizations can help identify emerging challenges, innovative opportunities and potential areas for collaboration.

Selection, implementation and sequencing of multiple tools will require extensive consultation and flexibility to reflect the unique considerations inherent to particular waste streams or sectors. This approach will provide sectors with flexibility to choose the tools suitable for achieving the outcomes set by government and go a long way toward achieving our goals of zero waste and zero emissions from the waste sector.

The following pages outline the sequencing for implementing our actions.

Coordination, Collaboration and Implementation

Action	Currently Underway	Short Term (2017-18)	Medium To Long Term (2019 and Beyond)
Action 1: Empower the Resource Productivity and Recovery Authority	Empower Authority	Continue to build Authority's capacity	Continue to improve the Authority's capacity to fulfil its role
Action 2: Issue policy statements to provide clear direction on the provincial interest		Develop and begin to implement first policy statement	Develop and implement additional policy statements and review existing
Action 3: Establish a registry and build data capacity to provide for evidence based decisions		Establish Resource Productivity and Recovery Registry	Maintain and continue to improve the registry
Action 4: Transition existing waste diversion programs to new producer responsibility framework without disruption of services	Begin Used Tires Program transition	Begin to transition other existing waste diversion programs	Complete transition of existing waste diversion programs
Action 5: Amend the 3Rs Regulations to increase resource recovery across all sectors		Develop and consult on amendments to 3Rs Regulations	Implement amended 3Rs Regulations
Action 6: Establish service provider requirements to protect the environment while promoting resource recovery		Develop and consult on improved service provider standards	Implement improved service provider standards

Coordination, Collaboration and Implementation

Action	Currently Underway	Short Term (2017-18)	Medium To Long Term (2019 and Beyond)
Action 7: Ensure landfills are well planned and managed to minimize their need and reduce greenhouse gas emissions	Improve landfill data by working with industries and Ministry of Finance	Improve landfill planning and management	Implement improved landfill planning and management
Action 8: Establish promotion and education requirements to support public participation in resource recovery		Begin setting promotion and education standards	Continue to set promotion and education standards
Action 9: Designate new materials to ensure producers are fully responsible for recovering more materials from products and packaging		Begin to designate new materials (e.g., batteries, fluorescent bulbs and tubes, additional WEEE materials) based on priorities	Continue to designate additional materials (e.g., mattresses, carpets, furniture and other bulky goods)
Action 10: Implement an action plan to reduce the volume of food and organic wastes going to landfill	Establish stakeholder working group	Develop, consult on and implement action plan	Implement additional actions
Action 11: Implement an excess soil management framework to increase the reuse of excess soil while protecting human health and the environment	Release framework	Develop and consult on regulations, standards and guidance	Implement additional actions

Coordination, Collaboration and Implementation

Action	Currently Underway	Short Term (2017-18)	Medium To Long Term (2019 and Beyond)
Action 12: Adopt and implement modern regulatory approaches to build on and promote innovative best practices	Begin to identify and adopt modern regulatory approaches	Continue to identify and adopt modern regulatory approaches	
Action 13: Improve and establish environmental standards to provide a level playing field and a strong foundation for markets		Develop and consult on new standards and adopt national, international and industry standards	Implement new standards
Action 14: Use green procurement practices to build market demand for recovered materials	Review existing policies	Develop and implement new/revised policies as identified by the review	Continue to implement new/revised policies as identified by the review
Action 15: Implement disposal bans to direct materials to end-markets		Develop and consult on policies regarding disposal bans (e.g., materials under existing waste diversion programs, food waste)	Implement bans, providing time for industries to prepare

D. Measure and Evaluate Success

The success of our initiatives – not just reducing, reusing and recycling more waste, but also building economic growth through a circular economy – will depend on our ability to gather, assess and measure data. As a province, we need to know how resources are being used, managed and reintegrated into the economy to set priorities and track our success.

To monitor and evaluate progress on the strategy's goals of zero waste and zero greenhouse gas emissions, the province has identified a number of performance measures, including:

Move towards zero waste

- reduce waste sent to landfill – as demonstrated by declining tonnes of waste sent to landfill with a visionary goal of zero waste

Move towards zero greenhouse gas emissions from waste sector

- reduce greenhouse gas emissions from the waste sector – as demonstrated by declining tonnes of greenhouse gas emissions from the waste sector (with a goal of zero greenhouse gas emissions)
- implement waste-related actions in Ontario's Climate Change Action Plan – as demonstrated by progress updates contained in regular reports on the Action Plan

Support evidence-based decision making

- improve understanding of resources recovered and their value to improve decision making – as demonstrated by an increase in publicly available resource recovery data and the timely collection and reporting of this data

Transition

- empower the Resource Productivity and Recovery Authority to oversee producer responsibility – as demonstrated by the Authority's progress in establishing capacity and its oversight, compliance and enforcement activities
- timely, smooth wind-up of programs under the Waste Diversion Transition Act, 2002 – as demonstrated by progress in winding up programs and industry funding organizations

Target areas for greater diversion

- effectively implement producer responsibility – as demonstrated by establishing new requirements and designating materials under the producer responsibility regime and evidence that producers are meeting requirements (through amount of compliance and enforcement measures needed)

- effectively implement generator and service provider requirements – as demonstrated by the progress of the review and implementation of the 3Rs Regulations, including generators and service providers meeting requirements
- increase food and organic waste diversion – as demonstrated by progress in developing and implementing a framework to reduce food wastes and an increase in the amount of food and organic wastes diverted from landfills. Potential targets could include 40 per cent of organic wastes diverted by 2025 and 60 per cent by 2035

Create conditions to support sustainable markets

- implement modern environmental standards – demonstrated by progress in developing and implementing the modern regulator initiative

E. Conclusion

Effective resource recovery and waste management are critical to a healthy and prosperous future for our province. By transitioning to a circular economy, where Ontario increasingly reuses and recycles the resources it already has, we have the opportunity to be leaders of a global movement toward a more sustainable model with significant economic, social and environmental benefits.

Making the transition will require a shift in how we think about waste. It will mean changing our perspectives, values and habits. A circular economy aims to eradicate waste, not just from manufacturing processes, but from our everyday lives.

Together with the Waste-Free Ontario Act, 2016, the Strategy for a Waste-Free Ontario will guide these changes and guide our progress over the next 10 years. It will move the province toward achieving our aspirational goals of zero waste and zero greenhouse gas emissions from the waste sector.

As we put this strategy into action, the province will consult on implementing the proposed actions with its valued stakeholders, including the waste management sector, urban, rural and

northern municipalities, Indigenous communities, traditional large and small businesses, innovators, environmental non-governmental organizations and the farming community. We will look to other jurisdictions for best practices and lessons learned in the private, public and not-for-profit sectors to help inform the development of innovative circular economy solutions,

such as new processes, products, policies and partnerships.

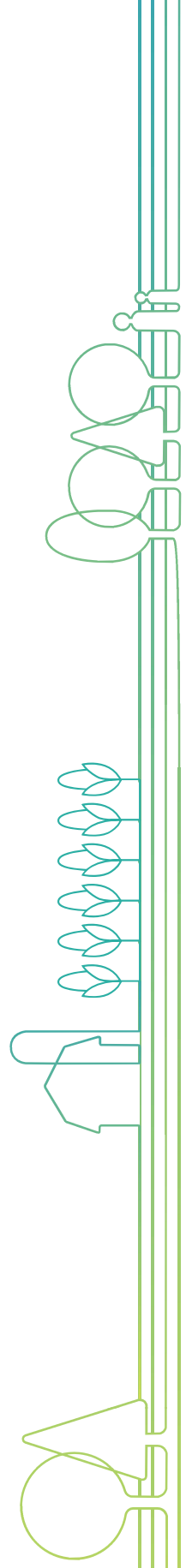
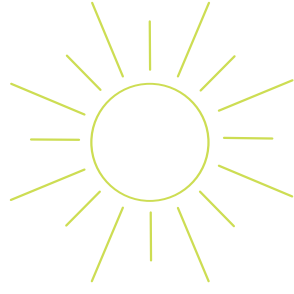
This strategy is the first step in a long-term process. Over the coming years, we can work together to transform our province and beyond to ensure a healthy, prosperous and green future.



Endnotes

- 1 Residential data for 2014 based on former Waste Diversion Ontario and non-residential data for 2012 based on Waste Management Industry: Business and Government Sectors, 2012, Statistics Canada.
- 2 Residential data based on former Waste Diversion Ontario and non-residential data based on Statistics Canada.
- 3 Based on Canada-National Inventory Report 1990-2014-Part 3, Table A12-6, Environment and Climate Change Canada. http://unfccc.int/files/national_reports/annex_i_ghg_inventories/national_inventories_submissions/application/zip/can-2016-nir-14apr16.zip
- 4 Ministry of the Environment and Climate Change.
- 5 Ministry of the Environment and Climate Change.
- 6 Statistics Canada, Waste Management Industry Survey, 2004 and 2012.
- 7 Ministry of the Environment and Climate Change.
- 8 Ministry of the Environment and Climate Change.
- 9 China Association of Circular Economy. <http://en.chinacace.org>
- 10 Scottish Government, Leading the way in circular economy. <http://news.gov.scot/news/leading-the-way-in-circular-economy>
- 11 European Commission, Circular Economy Strategy. http://ec.europa.eu/environment/circular-economy/index_en.htm
- 12 Association of Municipalities of Ontario, New Waste Reduction and Resource Recovery Framework Legislation, April 15, 2015. <https://www.amo.on.ca/AMO-PDFs/Reports/2015/MOECC-LTR-New-Waste-Reduction-and-Resource-Recover.aspx>
- 13 Statistics Canada, Waste Management Industry Survey, 2012.
- 14 Based on former Waste Diversion Ontario Residential GAP 2014 residential data and
- 8 Ministry of the Environment and Climate Change. Large landfill sites list and Small landfill sites list. <https://www.ontario.ca/data/large-landfill-sites> and <https://www.ontario.ca/environment-and-energy/small-landfill-sites-list?drpDistrict=all&drpStatus=Open>
- 15 Ministry of the Environment and Climate Change. Small landfill sites list. <https://www.ontario.ca/environment-and-energy/small-landfill-sites-list?drpDistrict=all&drpStatus=Open>
- 16 Ministry of the Environment and Climate Change. <https://www.ontario.ca/environment-and-energy/small-landfill-sites-list?drpDistrict=all&drpStatus=Open>
- 17 Ministry of the Environment and Climate Change.
- 18 National Inventory Report 1990-2014: Greenhouse Gas Sources and Sinks in Canada, Part 3, Environment and Climate Change Canada. <https://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=662F9C56-1>
- 19 Ministry of the Environment and Climate Change.

- 20 Ministry of the Environment and Climate Change.
- 21 Based on former Waste Diversion Ontario, Stewardship Ontario and Ministry of the Environment and Climate Change.
- 22 Ministry of the Environment and Climate Change.
- 23 Ministry of the Environment and Climate Change.
- 24 VCMI, Food Waste in Canada – \$27 Billion Revised, 2014
- 25 The Cost of Canada's Annual Food Waste. VCM International, 2014. <http://vcm-international.com/wp-content/uploads/2014/12/Food-Waste-in-Canada-27-Billion-Revisited-Dec-10-2014.pdf>
- 26 National Inventory Report 1990-2014: Greenhouse Gas Sources and Sinks in Canada, Part 3, Environment and Climate Change Canada. <https://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=662F9C56-1>
- 27 National Inventory Report 1990-2014: Greenhouse Gas Sources and Sinks in Canada, Part 3, Environment and Climate Change Canada. <https://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=662F9C56-1>



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