



bags, with 15 Canadian jurisdictions having implemented SUP bag bans or intending to implement bans, but jurisdictions are also banning or intending to ban plastic straws and polystyrene cups and containers.

The Circular Economy approach embraces the concepts of repair/refurbish and disassembly, design for the environment, 100 percent recycled content, etc. Greenhouse Gas reduction also factors heavily into the Circular Economy procurement principles. The cities of Toronto and Metro Vancouver are beginning to address these principles in their procurement policies and waste management approaches.

While Canadian jurisdictions have begun to address key topics such as SUPs, Circular Economy, and food waste issues, we need to look at Europe for the greatest leadership in addressing these topics as they relate to waste minimization and diversion. In 2015, the European Commission adopted a Circular Economy action plan to help move Europe towards a Circular Economy. The plan identified 54 actions that have been implemented and intended to “close the loop” on product lifecycles, including promoting eco-design, right to repair, recycled content through procurement and food waste reduction. European countries “taking charge” include Scotland, the Netherlands, Sweden and Germany. The European Union also recently enacted the Single-Use of Plastics Directive, which favours product bans, EPR schemes, design for environment requirements and collection requirements to address the challenges of SUPs.

European countries have successfully implemented other schemes to promote waste reduction and diversion, including landfill levies that help to make the costs of waste diversion programs comparable to the cost of landfill, thus creating a “level playing field” for waste diversion programs, and food waste reduction targets, bans and campaigns to reduce the amount of food waste generated and requiring management.

1.2 Demographic and Lifestyle Trends

Not unlike other countries, Canada is undergoing an unprecedented change in its demographics with an aging population, more women in the workforce and more people in single family households, which is having a significant impact on the need for convenient foods and lifestyles.¹ These trends, along with the influence of advertising, have helped to create a society governed by fast food, fast technology

¹ Consumer Trend Report: Convenience. Market Analysis Report. June 2010. Government of Canada at http://windmillwebworks.sytes.net/canadianswine/newsitems/Canada%20Consumer%20Report_EN.pdf



and fast lifestyles driven by convenience and resulting in a throw-away society, characterized by:

- Increasing access to technology that makes us dependent on needing the newest and best, resulting in the disposal of electronic goods on a regular basis.
- Increasing access to cheap and convenient food that encourages wasteful habits and increasing amounts of wasted food and packaging, especially single-use plastics.
- Increasing access to cheap goods, such as clothing – referred to as fast fashion – that are designed to wear out or break down over a short period of time, requiring replacement rather than repair.
- Technology that is designed to become obsolescent after a period of time and requiring replacement in order to have the latest and fastest.

The increase in smaller families and single person households are important trends in urban centres. This is resulting in a greater demand for convenient food and packaging, featuring customized products and freshly prepared take-home meals, as well as greater time spent eating out or ordering in.²

1.3 Evolving Tonne

Over the past decades, the composition of the waste stream has been changing – referred to as the “Evolving Tonne” - with some common themes:

- Changes in packaging as heavier packaging is replaced by lightweight packaging;
- The slow decline of the hard print newspaper and magazine industry as they move to an online format; and
- The increase of cardboard packaging as e-commerce continues to grow. The rise in e-commerce has resulted in the increased use of cardboard packaging for shipping and delivery, compared with its use in “brick and mortar” retail.
- The impacts on the Blue Box program have been significant, with programs experiencing lower recycling tonnages but higher volumes of materials, resulting in higher collection and processing costs. This problem is further exacerbated by the implementation of the China National Sword policy in February 2018, which closed the door on the import of mixed post-consumer plastics and paper to the Chinese market. Communities that have been hardest hit by the China National Sword are generally characterized as having single

² Consumer Trend Report: Convenience. Market Analysis Report. June 2010. Government of Canada at http://windmillwebworks.sytes.net/canadianswine/newsitems/Canada%20Consumer%20Report_EN.pdf



stream, automated cart recycling programs. These programs tend to have the highest contamination and residue rates. Communities that continue to provide a two stream, fibre and container, recycling program have experienced fewer end market disruptions due to the cleaner streams and lower contamination rates.

Despite the recent negative news about struggling recycling programs and end markets, there is some room for optimism. There has been a wave of recent announcements about the construction or planned construction of new plastic and fibre processing facilities and capacity in North America that will help to establish new end markets for mixed plastics and paper packaging.

Plastics have become a mainstay in our society with its role and importance having grown consistently over the past 50 years. Despite the proliferation of plastics throughout the world, very little of it is recycled nor is it made into equal or better products/ packaging, known as “upcycling”. Currently, 9 percent of plastic packaging is recycled in Canada.³ Some of plastic packaging’s biggest challenges comes in the form of single-use plastic packaging and flexible packaging. One of the most dramatic changes in packaging in the past several years that is contributing to the disposal dilemma has been the enormous growth in the use of flexible plastic packaging, e.g. pouches and laminated packaging, which cannot be recycled at this time. While the reduced weight of flexible packaging provides transportation benefits associated with reduced transportation costs and fewer Greenhouse Gases, compared with heavier packaging materials, it remains a problematic material to manage at its end of life with few waste diversion options available other than using it as feedstock at energy-from-waste facilities.

The pressure from governments and citizens to reduce the amount of plastic, including single-use plastics being consumed or to improve plastic packaging so that it can be recycled has forced corporations to respond by announcing initiatives and targets to reduce single-use plastics, e.g. switching to non-plastic packaging, and/or increasing recycled content in their plastic packaging. At the same time, companies are turning to bioplastic packaging, which has its own inherent issues.

1.4 Collection Trends

In terms of municipal collection services, some municipalities are beginning to report disruptions in curbside collection service due to the lack of reliable drivers and collection crews. The driver and collection crew shortages are placing growing

³ Economic Study of the Canadian Plastics Industry, Markets and Waste. 2019. Prepared for Environment and Climate Change Canada by Deloitte at <http://publications.gc.ca/site/eng/9.871296/publication.html>



pressure on municipalities with manual collection to explore automated cart collection services to try to alleviate some of the issues associated with staffing problems. New trends in collection services include increasing use of biofuels and electric vehicles.

1.5 Impact of these Trends on the City of Ottawa

The impact of packaging changes has already been felt by the City, with a decline in fibres and increases in the numbers and types of plastic packaging. The continuing impact of the evolving tonne will depend on how the Blue Box program transitions to a full Producer Responsibility program. There is potential for a move towards greater use of compostable packaging which could impact the City's organics program. Municipalities, including Ottawa, will need to monitor the Ontario Government's response to this challenge and continue to advocate for industry to assume full responsibility for the cost to manage these materials at their end-of-life.

There are a number of opportunities for the City to explore as this SWMP progresses, from changes to how materials are collected, processed and disposed to regulations, policies or strategies that encourage reduction and reuse, primarily for the residential sector. Ottawa has an opportunity to address a Circular Economy procurement strategy that goes beyond green procurement and sustainable procurement. Circular economy procurement will help Ottawa achieve closed-loop recycling, maximized recycled content, waste avoidance, reduction and reuse of goods, which will lead to further GHG reductions.

There will be profound changes in how waste is managed in the next few years, and the City will need resiliency and flexibility in their future waste management system to respond to these changes.