

**Edmonton's
Plan to
Reduce
Single-use
Items**

Edmonton

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Executive Summary

The plan to reduce single-use items (SUI Plan) has been developed to help Edmonton's residents, visitors and organizations reduce their reliance on single-use items. Single-use items (SUI) include shopping bags, straws, utensils, individually packaged condiments, cups and lids, and containers. They can be made of a range of materials including conventional plastics, alternative plastics that may be compostable or biodegradable and paper or other fibre products. Regardless of their composition, the production and consumption of SUI has environmental, social and economic impacts, and the management of these items creates costs for the City and businesses.

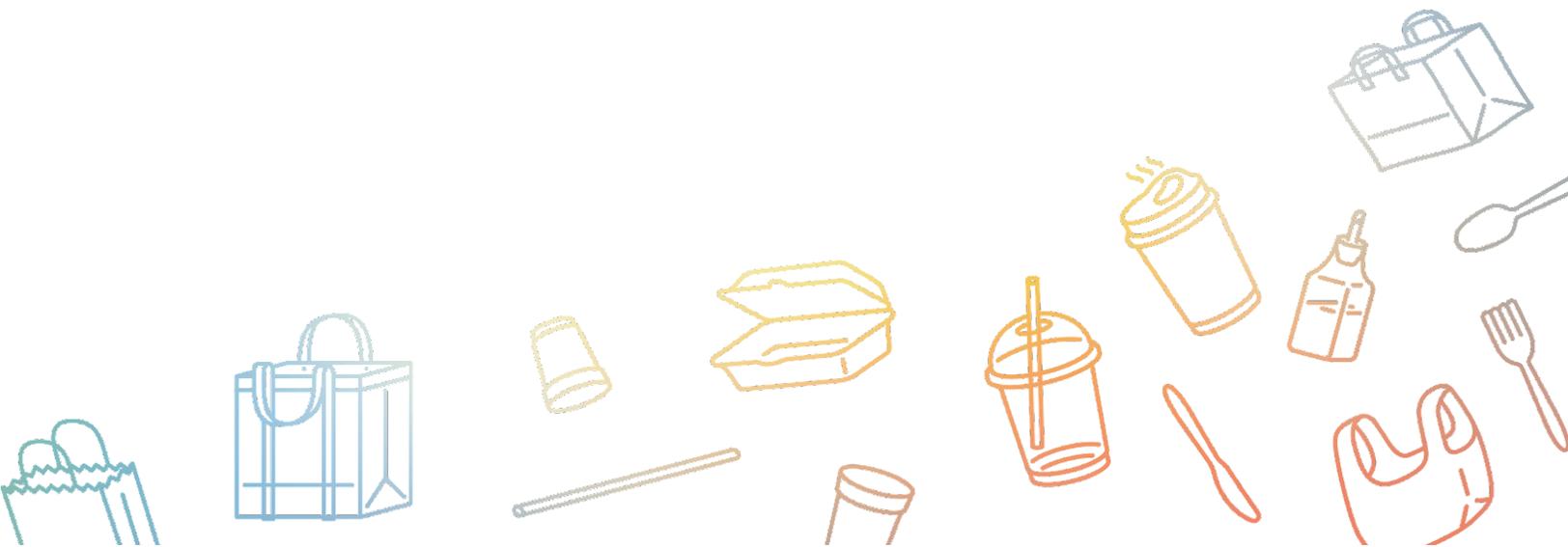
The SUI Plan aligns with the Zero Waste Framework that forms the foundation of the City's approved 25-year Waste Strategy. That means that priority is given to eliminating unnecessary SUI and making reusables the norm rather than simply replacing single-use plastic items with single-use items made of other materials. Since non-plastic SUI also have negative impacts associated with production and distribution, eliminating unnecessary SUI, and replacing essential SUI with reusable items, are the only approaches that have universally improved outcomes. A preference for reduction, rather than substitution, is fundamental to the SUI Plan.

The SUI Plan has been informed by research and findings from other local governments, as well as input from residents, businesses and industry associations in Edmonton. The SUI Plan recommends a combination of regulatory and voluntary approaches to reduce SUI. Regulatory actions reflect the City's level of authority and are proposed for situations where alternative products are readily available, industry is ready to comply and unintended consequences can be mitigated. Voluntary actions will be encouraged by education and outreach, working with other levels of government and leading by example. Table ES1 summarizes which SUI are proposed to be regulated by bylaw, and which SUI will be addressed through voluntary actions.

Table ES1. Summary of recommended approaches

Approach	Type of Single-use Item
Regulated by bylaw	Shopping bags
	Foodware accessories (e.g. utensils, straws, stirrers, splash sticks, cocktail sticks, toothpicks, pre-packaged condiments and napkins)
	Polystyrene foam (Styrofoam, or "foam") food serviceware (cups and containers)
	Other disposable cups (non-foam)
Voluntary actions	Other disposable containers (non-foam)

The bylaw will come into effect one year after it is adopted. During that year, the City will focus on raising awareness among organizations and residents, and building capacity within the business community to comply. Affected businesses will be offered plain language toolkits and printable signage, and a grant program will be offered to support non-profit organizations with the transition. Educational campaigns will focus on helping residents understand their role in reducing negative environmental impacts and making reusables the norm. Once the bylaw is in effect, it will be enforced with a priority for education and outreach except where more strict enforcement is deemed essential to the overall SUI Plan.



Introduction

Single-use items are designed to be thrown away after being used only once. They can be made of a variety of materials, including plastic, wood, paper and other fibre products. SUI can typically be grouped into three categories: packaging, convenience items and essential items.¹ The SUI Plan focuses only on some types of secondary packaging and convenience items.

Each year Edmontonians throw away an average of 450 million SUI such as shopping bags, takeout containers, cups, utensils and straws. While some of these items can be recycled, the majority ends up being discarded, either in the garbage stream or as litter. SUI that are disposed of in the garbage stream are typically landfilled, and represent consumed resources and energy. Littering of these items results in significant and widespread consequences - including increased clean up costs, habitat damage and clogged storm drains - and contributes to the proliferation of microplastics in the environment.²

Guiding Principles

The Zero Waste Framework and waste management hierarchy adopted by the City of Edmonton in the 25-year Waste Strategy forms the foundation of Edmonton's Plan to Reduce Single-use Items. Figure 1 illustrates how the waste management hierarchy applies to SUI. Preference is given to eliminating or reducing SUI by using them only when necessary (e.g. straws are not necessary for most people; shopping bags are not needed for small purchases).

¹ **Packaging** includes primary packaging (e.g. food wrappers, retail product packaging, beverage and bottles for personal care products), secondary packaging (e.g. shopping bags, fruit and vegetable bags, food containers), and tertiary packaging (used to group larger quantities of items for transporting them from production facility to point of sale). **Convenience items** include cutlery, stir sticks, accessories such as napkins and single serve condiment containers, hot and cold drink cups and lids, cup carrying containers, straws and quick-serve containers. **Essential items** include healthcare items such as personal protective equipment and sterile packaging.

² [Characterization of microplastics and anthropogenic fibres in surface waters of the North Saskatchewan River, Alberta, Canada, Government of Canada Science Assessment of Plastic Pollution](#)

A preference for reduction, rather than substitution is fundamental to the SUI Plan.

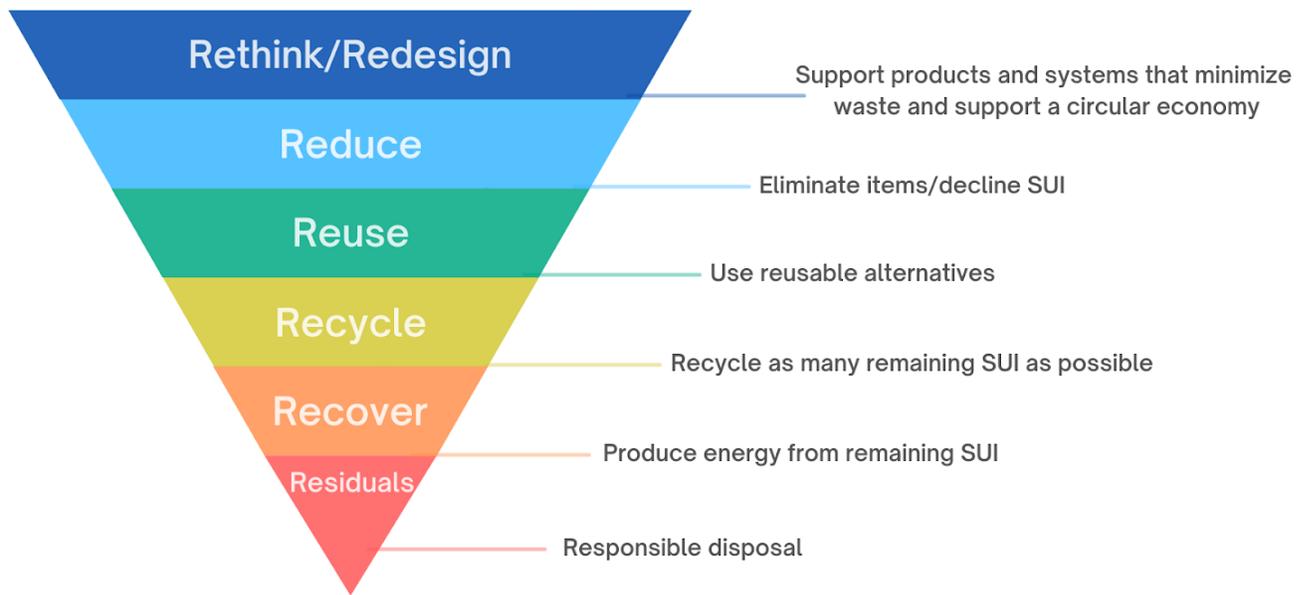


Figure 1. Waste management hierarchy applied to SUI

In addition to overall alignment with the waste management hierarchy, the following principles shaped Edmonton's approach to reducing reliance on single-use items:

- **Build capacity** - The SUI Plan commits to raising awareness, providing education, and building capacity within the business community to adjust to the bylaw before enforcement. Capacity building may include technical assistance, printable signage and public education materials. In addition, voluntary measures have been included that will be encouraged, but not enforced.
- **Provide flexibility** - A combination of regulatory and voluntary measures is proposed, recognizing that there is no one-size-fits-all solution to eliminating SUI. Implementation timelines will also be flexible, with deadlines set to allow businesses sufficient time to adapt.
- **Be inclusive** - Actions to reduce SUI need to be accompanied by support programs to address potentially negative impacts on people who have accessibility needs, health-related challenges, or who have vulnerable socio-economic conditions. The SUI Plan is informed by a Gender Based Analysis Plus (GBA+) assessment that considered how diverse groups of people may experience the proposed changes. The implementation of the SUI Plan will require ongoing listening to vulnerable populations and adaptation to meet their needs.

- **Harmonize** - Strategies and bylaws in other Alberta municipalities and western Canada were reviewed and have influenced Edmonton's approach. This harmonization will reduce barriers on affected businesses and streamline education and outreach efforts. Draft federal regulations related to single-use plastics have also influenced the SUI Plan.
- **Continuously improve** - Impacts of the bylaw will be assessed within three years of implementation to determine if and when stronger measures are suitable as new alternatives to SUI become available, capacity for reduction grows and new solutions to mitigate unintended consequences are developed.

These principles incorporate feedback gathered from residents and businesses during engagement in 2019 and 2021.

Objectives

Edmonton's Plan to Reduce SUI is a foundational step towards supporting Edmontonians in reducing waste. Shifting the way Edmontonians think about SUI is expected to change attitudes towards waste and waste reduction in general.

The reduction of SUI is designed to achieve a range of environmental objectives, while minimizing potential social and economic impacts. The environmental objectives include:

- Reduce waste generation and support Edmonton's Zero Waste Framework;
- Reduce terrestrial and aquatic litter; and
- Reduce overall life cycle impacts (e.g. greenhouse gas emissions, water consumption and release of toxic chemicals) associated with the production, distribution, use and disposal of SUI.

The examination of social impacts considered the level of support expressed by residents, businesses, associations and institutions. Conversations with stakeholders showed that there is ongoing public interest and support for action to reduce SUI. Social impact analysis also considered the potential for disproportional effects on groups based on sex, gender, age, place of residence, ethnicity, socio-economic status, employment status, disability and various other identity factors.

Economic impacts were examined through the lens of businesses, consumers and the City. Businesses are expected to save money in the long-term compared to the status quo, as switching to reusables has led to documented cost savings in other jurisdictions. Fees on SUI

will be structured to allow consumers to avoid them by choosing reusable options. Reduced SUI may also reduce the City's costs for litter clean up and servicing public space waste receptacles. The efficiency of the City's waste processing facilities may also be improved by reducing SUI contamination in the recycling and organics streams. While some SUI are recyclable, they are often not sorted properly by residents, which can cause problems with the equipment at the Materials Recovery Facility and impact the marketability of Edmonton's recyclables.

Additional objectives, such as aligning with draft federal regulations for single-use plastics, and ensuring the enforceability of any potential regulations, were also considered.

Context

Types and Quantity of SUI in Edmonton

It is estimated³ that over 450 million SUI are thrown in the garbage every year in Edmonton, across both the residential and non-residential sectors (Figure 2). These numbers include items made of paper, plastic, bamboo and other materials.

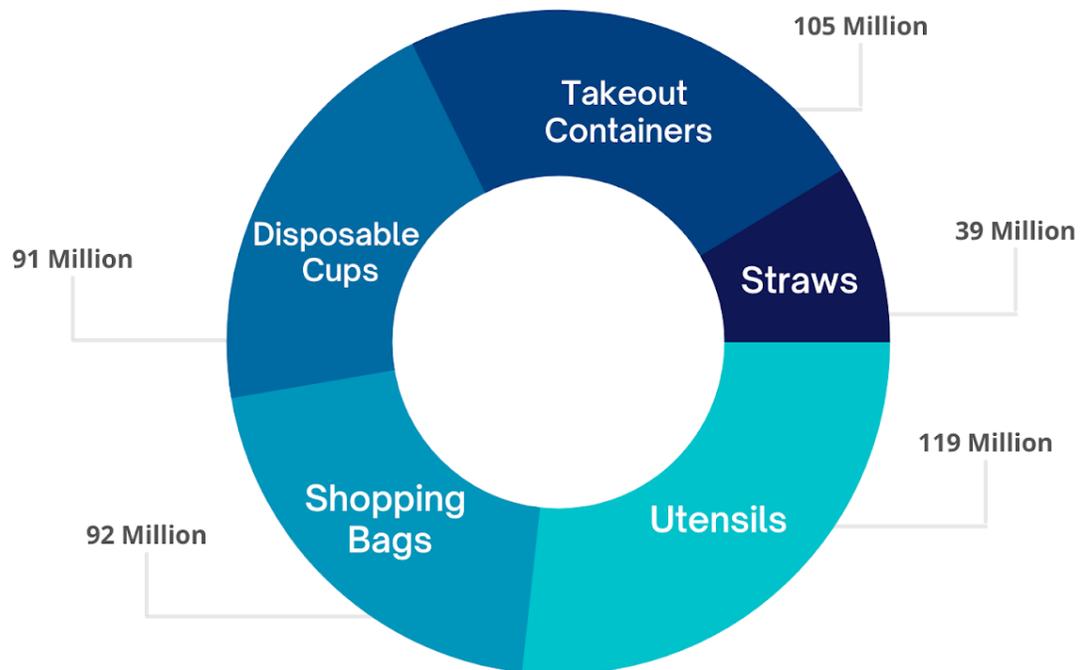


Figure 2. Estimated number of SUI disposed in Edmonton annually

³ Based on detailed waste composition studies conducted in Spruce Grove (2019) and Metro Vancouver (2018).

The above items are estimated to make up approximately 10,000 tonnes of garbage. Additional SUI (such as paper and plastic shopping bags, and some takeout containers) are also found in the recycling stream and have not been quantified.

SUI are also commonly littered; 42 per cent of large litter items identified in Edmonton's 2019 litter audit were single-use items. Single-use cups and bags were among the most littered items.

Relation to Existing Municipal Strategies and Initiatives

[Edmonton's 25-year Comprehensive Waste Management Strategy](#) (25-year Waste Strategy) was approved in 2019, and sets the City of Edmonton on a path of ambitious, transformational change. It emphasizes waste reduction in addition to affirming a commitment to divert 90 per cent of waste from landfill across all sectors.

Single-use plastics were discussed in detail during [engagement](#) associated with the development of the 25-year Waste Strategy. A majority of Edmonton residents and businesses that participated in the engagement supported the elimination, restriction or addition of fees on polystyrene foam (Styrofoam, or "foam") (84 per cent for both sectors), straws (81 per cent of residents and 82 per cent of businesses) and plastic checkout bags (83 per cent of residents and 87 per cent of businesses).

In 2021, Edmonton's first [Waste Reduction Roadmap](#) (Roadmap '24) was approved. Roadmap '24 identified programs, services and regulations that will result in less waste being produced by residents, businesses, public institutions and other organizations, for the period 2021 to 2024. Residents and other stakeholders were engaged during the development of Roadmap '24, and reiterated a desire for regulations and other approaches to reduce product packaging, including the use of fewer disposables (63 per cent) as well as reducing other single-use items (64 per cent). Many respondents also noted that they are able to use reusable cups (66 per cent) and reusable shopping bags (61 per cent), suggesting that some single-use reduction consumer behaviours have already become commonplace. The plan to reduce single-use items is an outcome of Roadmap '24, and Utility Committee specifically directed that both the SUI Plan and a bylaw to reduce SUI be coordinated with, but not delayed by, related provincial and federal regulations.

The SUI Plan, like the 25-year Waste Strategy and Roadmap '24, supports the City of Edmonton's commitment to climate resilience and the Big City Move to be Greener as We Grow.

COVID-19 Pandemic

The COVID-19 pandemic led governments and retailers to take a cautious approach towards reusable items, and slowed the adoption and implementation of bylaws to restrict single-use items. Now that two years have passed since the pandemic was declared, more is known about the transmission of COVID-19, and authorities such as the US Centers for Disease Control have stated that transmission from contaminated surfaces does not contribute substantially to new infections.⁴ Furthermore, retailers and the public are recognizing that disposable items, which pass through many hands in complex supply chains, are not inherently cleaner than reusable alternatives.

This research has given local governments and retailers more confidence to proceed with SUI restrictions and renewed efforts to promote reuse as a way to reduce waste and support the principles of the circular economy.

Gender Based Analysis (GBA+)

It is vital that SUI reduction measures take into account the needs of all Edmontonians. A gender-based analysis plus (GBA+) lens⁵ was applied to the selection of preferred approaches to reducing SUI. The use of a GBA+ framework structured the consideration of potential impacts of regulations on certain demographic groups, including people with disabilities, low-income individuals, women and single parents. For example, some individuals (including people with disabilities and those recovering from medical procedures) rely on straws to safely consume beverages and nutrition, and flexible plastic straws best meet their needs.⁶ These needs were taken into consideration in designing an approach to reduce the unnecessary use of straws. Similarly, the GBA+ analysis revealed that mandating fees for some SUI to disincentive their use

⁴ [Scientific Brief: SARS-CoV-2 Transmission | CDC](#)

⁵ GBA+ is a process to examine and address how policies, programs and services impact diverse individuals and groups. Multiple identity factors, including age, race, ability, education, ethnicity, geography, health, language, class, sex and gender need to be considered to improve planning and decision-making. By using a GBA+ lens, diverse perspectives, experiences and needs are taken into account to create services that serve everyone.

⁶ Research shows that substitutes for single-use plastic flexible straws - including straws made from metal, silicone, glass, paper, bamboo and pasta - do not meet accessibility needs. Non-plastic straws typically cannot be repositioned, which is a key consideration. Straws made of alternate materials can pose choking hazards if the straw breaks (pasta, bamboo), may not be safe at high temperatures (metal, glass), may be a food allergen risk (pasta), are not rigid enough (paper), or pose an injury risk (metal, glass). Reusable straw substitutes can also be difficult to clean in a commercial setting. Using a straw that has not been properly sanitized increases the risk of other health concerns, particularly for persons who are immunocompromised.

can be a burden on residents. Therefore, efforts have been made in developing the recommendations to ensure that vulnerable individuals can avoid additional fees.

The City will continue to engage with vulnerable populations to develop support programs for regulations to minimize the risk of unintended consequences. This approach balances the need for equity with the achievement of environmental objectives and embodies the SUI Plan's principles of being inclusive and continuously improving.

Tools that are created to support the implementation of the SUI Plan will also be developed with accessibility considerations in mind. For example, icons, images and limited/essential text will be used in educational materials so that the materials are widely accessible.

Regulatory Approach

Bylaw Structure

A stand-alone bylaw is proposed, which will apply to all City of Edmonton business licence and event permit holders, with exceptions where necessary. The SUI bylaw will reference, but not impact, the [Business Licence Bylaw](#). Facilities that do not require a business licence (such as provincially-regulated healthcare facilities) will not be subject to the SUI bylaw but are expected to achieve SUI reductions as federal regulations are enacted.

Bylaw Scope

The bylaw is intended to regulate the distribution of the following types of SUI:

- Shopping bags;
- Foam food serviceware (cups, containers, bowls and plates);
- Foodware accessories (e.g. utensils, straws, pre-packaged condiments and napkins); and
- Cups (other than foam).

The regulations covering each type of SUI will vary, and could include bans, fees, a requirement for items to be requested before they are provided and requirements for reusables. Detailed recommendations are provided as Attachment 2 of City Operations report CO01033.

Responding to the direction of City Council, Administration will prepare a bylaw for Public Hearing as early as summer 2022, with the potential to be enacted by City Council later in 2022 and implemented by the end of 2023.

Voluntary Measures

Food Serviceware

Administration does not currently recommend a regulatory measure for single-use food serviceware that is not made of foam as there is limited access to and capacity for transitioning to reusable food serviceware for takeout and delivery food services, and the businesses that provide these services continue to face significant challenges stemming from the COVID-19 pandemic. The City will work with businesses to support the adoption of reusable serviceware, and to encourage the use of serviceware that is locally recyclable. The City will also work to educate residents and businesses about the shortcomings of compostable serviceware, which are not currently accepted by the City's diversion programs.

Applicable to All Single-use Items

Voluntary Reporting

The City will develop a voluntary reporting program, whereby businesses are encouraged to disclose the type and number of SUI used on an annual basis. Building on the success of the City's [Building Energy Benchmarking Program](#), the City will find ways to recognize businesses that have made exceptional progress towards reducing SUI.

Incentives

In partnership with Capital City Clean Up, a new grant program will be launched to provide funding to registered non-profit organizations who need help with the cost of replacing SUI with reusable alternatives. The grant will reduce the amount of single-use serviceware used, and support compliance with the proposed bylaw. The grant will also support social enterprise, resulting in positive social and environmental impacts. The intent is for the grant to open for applications after the bylaw is approved.

As participation in a new voluntary reporting program builds, the City will also explore opportunities and mechanisms to accelerate the adoption and/or impact of voluntary measures to reduce SUI by creating targeted financial incentives for reporting organizations where viable and within approved budgets.

Technical Assistance

Guidance documents related to reducing SUI and replacing disposable SUI with SUI that can be successfully recycled will be developed and promoted as part of the outreach program

associated with bylaw implementation. The documents may also include case studies and calculators that can be used to estimate the cost/savings of switching from SUI to reusable alternatives.

Additional technical assistance for individual businesses will be provided by City subject matter experts as capacity permits. Given the indeterminate demand for hands-on technical assistance, priority will be given to businesses that face unusual challenges related to compliance and those working to introduce new, scalable approaches to transition to reusable items.

Advocacy for Extended Producer Responsibility

Administration strongly supports the development of Extended Producer Responsibility (EPR) regulations in Alberta, and will continue to engage with Alberta Environment and Parks regarding the details of the regulations. Administration will advocate for producers to be required to report on measures of reuse, and for the list of materials covered by the EPR regulations to include all disposable cups and serviceware. While EPR is traditionally focused on increasing diversion (rather than achieving reduction), Administration appreciates that EPR fees may play a role in incentivizing waste reduction, and that diverting SUI is preferable to the current state where most SUI are disposed of in the garbage.

Support Programs

Once approval is received from City Council regarding the proposed bylaw direction, Administration will engage further with equity-seeking groups to gain insight on potential unintended impacts of the bylaw, and develop support programs to avoid the creation of undue hardship. An example of a support program would be setting up ways for low-income residents to access low-cost or free reusable alternatives to single-use items.

Businesses will also be encouraged to develop their own community support programs. The City will share examples and case studies of such programs, including accepting donations of reusable bags and cups for other customers, and pay-it-forward models (where customers pay for more SUI than they need to establish a fund for people who can't afford the fees themselves).

Implementation Approach

Transition Period

Administration heard from businesses that a key factor in the successful implementation of the bylaw is sufficient lead time between bylaw adoption and the effective date. For this reason, a one year transition period is proposed following bylaw adoption.

The development and implementation of voluntary programs will continue beyond the date the bylaw comes into effect. The SUI Plan will remain in place for the duration of Roadmap '24 and throughout the next Waste Reduction Roadmap. Modifications to the SUI Plan may be identified during the development of subsequent Roadmaps, which may include recommendations for additional regulations to reduce SUI.

City Initiatives to Raise Awareness

Administration is committed to helping businesses and residents transition to using fewer SUI. Implementation will focus on raising awareness, building capacity and providing incentives, with enforcement of regulations being used once other efforts are exhausted.

During the transition year, the City will work with organizations and residents to build awareness of the upcoming changes. Administration will support organizations by providing them with a toolkit that describes recommended steps to take to prepare for the bylaw, including information about suppliers of preferred types of serviceware. The toolkit will be made available online and publicized widely. An outreach team will also work with Business Improvement Areas and other industry organizations to ensure widespread awareness of the bylaw and toolkit.

Partnerships to Raise Awareness

The City is not alone in its desire to reduce SUI, and will promote and amplify education and behaviour change campaigns led by industry organizations, not-for-profits and community groups who continue to be instrumental in shifting the collective mindset about waste in Edmonton. The goal is to shift attitudes and societal norms to create lasting behaviour change, and hearing messages from a range of sources, including non-government sources, will contribute significantly to shifting attitudes and behaviours.

Enforcement Approach

The intent is that all establishments holding a business licence will be required to comply with the bylaw, except where noted in specific exemptions.

Enforcement of the bylaw will be complaint-driven. If a business is found to be non-compliant with the bylaw, there are several actions the City may take. Initial actions will focus on education, outreach and support to help organizations comply with the bylaw requirements. Staff will use discretion, and enforcement will be reserved for cases of deliberate and harmful non-compliance after all outreach and education efforts have been exhausted.

Monitoring & Targets

Monitoring

Information from waste characterization studies will help Administration gauge the impact of the SUI reduction plan and bylaw.

Waste Services has committed to conducting regular waste characterization studies that will monitor the amount of SUI in the residential waste streams. The characterization of the commercial waste stream is not currently monitored, but plans are underway to monitor the commercial waste composition at a regional level.

Capital City Clean Up also conducts regular litter audits at over 100 sites and categorizes the findings by type of material. The annual results serve as baseline data and will allow the City to track changes in the occurrence and intensity of litter as a result of SUI reduction tactics.

Administration will also coordinate between departments to undertake public space waste audits. This work is important, as a substantial fraction of SUI are disposed of in public space waste containers.

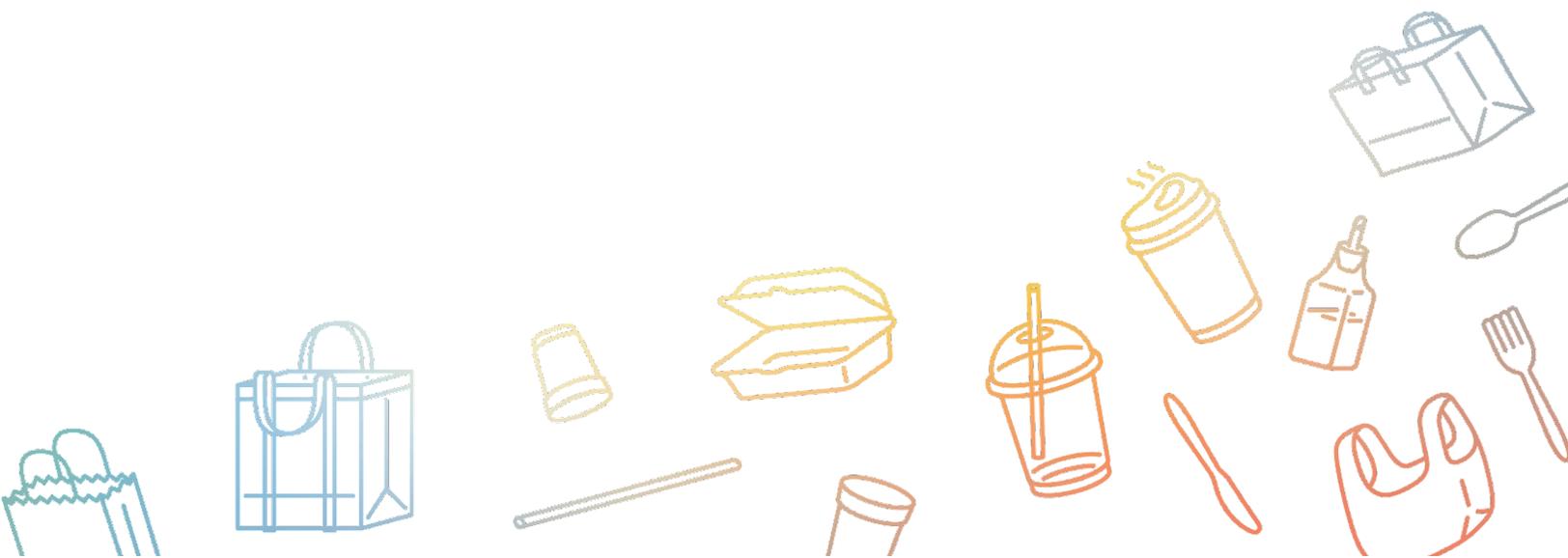
Targets

The City's overall waste reduction target is to reduce waste generation per capita by 20 per cent by 2044 (the duration of the 25-year Waste Strategy). While SUI represent a small portion of total waste generated, their quantity may reduce more rapidly than overall waste. Their reduction is an important first step in changing public attitudes around consumption and waste generation, and as such the targets for SUI reduction are accelerated compared to the overall targets set in Roadmap '24.

The following targets have been set for SUI reduction (where reduction is achieved by eliminating the items or transitioning to refillable/reusable formats):

- 10 per cent reduction in SUI per capita within two years of bylaw enforcement; and
- 20 per cent reduction in SUI per capita within four years of bylaw enforcement.

If the targets are not being met, Administration will revisit the SUI Plan and bylaw, and may propose further actions to increase the rate of reduction. Longer term targets will be set during the development of subsequent Waste Reduction Roadmaps.

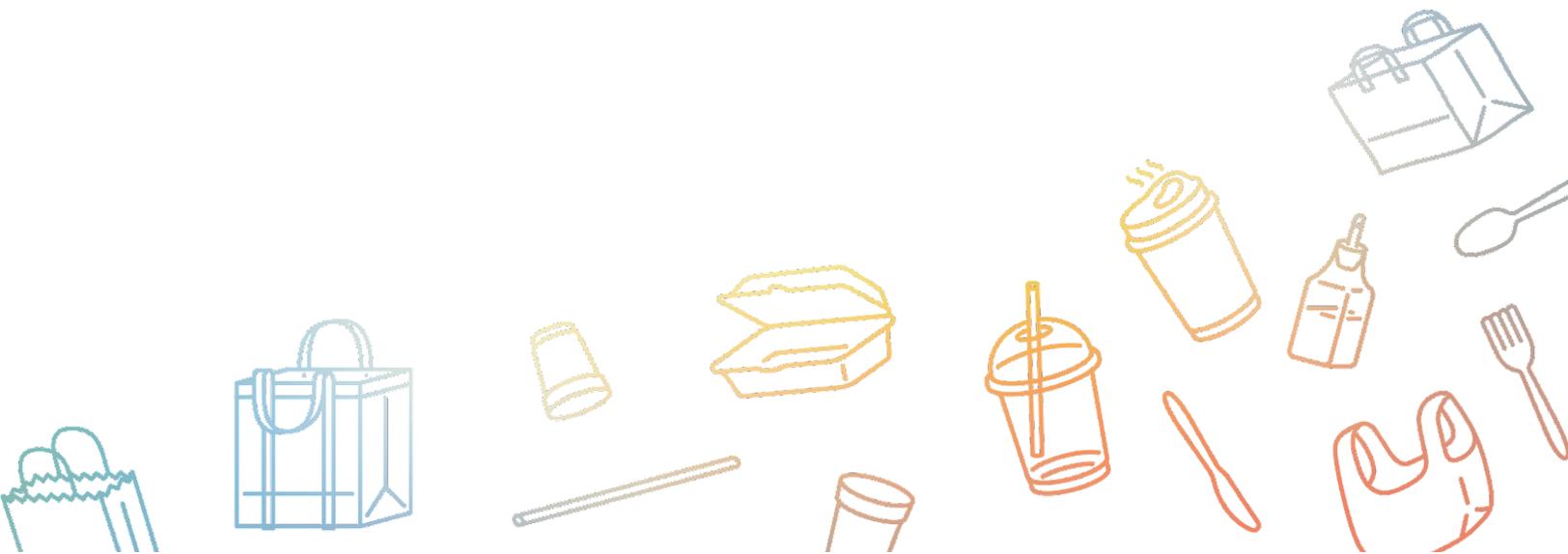


Appendices

Appendix A - SUI Plan Development Process

Appendix B - External Factors

Appendix C - Waste Hierarchy and the Role of Compostable SUI



Appendix A - SUI Plan Development Process

Development of Edmonton's Plan to Reduce Single-use Items began in [2018 with public engagement](#) in support of the development of Edmonton's Comprehensive [25-year Waste Strategy](#). A jurisdictional scan of best practices was complemented by the input of thousands of Edmontonians. Engagement results identified a public desire to bring Edmonton in step with internationally-recognized best practices in waste, including putting more emphasis on waste prevention and programs that promote waste reduction.

On September 10, 2019 Council approved the 25-year Waste Strategy which describes policy and service changes that will reduce waste, increase waste diversion and improve service delivery, grounded by a Zero Waste Framework.

An outcome from the 25-year Waste Strategy was the development of a [Waste Reduction Roadmap](#), which was approved in May 2021. The development of the Waste Reduction Roadmap gathered feedback through [three rounds of public and stakeholder engagement](#). The Roadmap reflects thoughtful and passionate concerns, feedback and suggestions from residents and stakeholders for the City to identify actions to reduce waste and mechanisms to measure their performance. Ten actions were outlined in the Roadmap to be implemented over the next three years. The development of a plan and bylaw to reduce SUI was identified as a priority action.

An expanded and updated jurisdictional scan identified best practices in SUI reduction, both locally and globally. The findings showed that a large majority of local governments have started banning plastic bags and styrofoam, but few have gone farther to eliminate or restrict other single-use items like cups, straws and containers. Those that have gone further typically use policy levers such as fees and by-request provisions, rather than bans.

A multi-criteria policy analysis was conducted to identify the preferred mechanism to restrict each type of SUI. The policy analysis considered environmental, social, economic and technical factors. As a result of the analysis, a draft approach was released publicly in November 2021.

Using the draft approach as a foundation, the City conducted interviews and focus groups with businesses in late 2021. The groups were separated based on industry/business type to ensure comprehensive feedback. Seven focus groups, a workshop for national chains and ten interviews were conducted. Feedback showed that businesses from all sectors were in support of the proposed changes. Local businesses expressed some hesitations around implementation

timelines and concerns regarding customer reactions, while the larger companies have already experienced these changes in other jurisdictions, and indicated that their priority was receiving clear communication on the timelines and the specific restrictions that would affect them.

In December 2021, the Canadian government released draft regulations and the timeline for banning the import, sale and manufacture of specific plastic items. Edmonton's draft approach to reducing SUI was evaluated and updated in the context of those regulations. This review resulted in a change to Edmonton's approach to regulating plastic straws (to mitigate a conflict related to the proposed federal approach) and ensured that Edmonton's plan will have a robust impact both in advance of and following the implementation of the expected federal regulations.

Appendix B - External Factors

Extended Producer Responsibility (Provincial)

Extended Producer Responsibility (EPR) is an environmental policy approach under which producers have financial and/or physical responsibility for their products through to the post-consumer stage of the product life cycle. EPR shifts operational responsibility and the cost of managing product waste from municipalities and taxpayers to manufacturers, brand owners and retailers.

In early 2021, the Alberta government announced its intent to introduce an EPR framework that would apply to packaging and paper products, including single-use plastics. Enabling legislation was passed in late 2021, and regulations with further details are expected in late spring 2022. The transition to an EPR framework could begin between fall 2023 and spring 2024, and will take several years to fully implement. Edmonton's City Council and Administration have been advocating for EPR for many years and will continue to engage with the provincial government to ensure the regulations meet the needs of the City.

Administration will review the regulations and their impact on the SUI Plan and associated municipal bylaw. While the proportion of single-use plastics that are recycled may increase under the EPR framework, and the costs of recycling those items will be borne by producers, EPR regulations are not likely to lead to a reduction in SUI. Nonetheless, EPR regulations are expected to be highly complementary to the reduction actions defined by the City's SUI Plan.

Federal Regulations on Single-use Plastics

Every year Canadians throw out over three million tonnes of plastic waste, about half of which is packaging and other non-durable items. Of the total amount thrown out, only nine per cent is recycled, four per cent is turned into energy, and one per cent (over 30,000 tonnes) enters the environment. The remaining 86 per cent ends up in landfills.

The federal government has [drafted regulations](#) to ban six single-use plastics: shopping bags, straws, stir sticks, cutlery, ring carriers and food serviceware made from plastics that are difficult to recycle. The government accepted public input up until March 5, 2022 and anticipates that the regulations will be finalized by the end of 2022. If the final regulations mirror the draft regulations, the manufacture and import of the targeted single-use plastics will be banned on the one year anniversary of the adoption of the regulations (by late 2023 at the

earliest), and the sale of the items will be banned on the two year anniversary (late 2024 at the earliest).

In addition to banning all single-use plastic shopping bags, straws, stir sticks, cutlery and ring carriers, the federal regulations will ban the use of single-use food serviceware that is made from polyvinyl chloride, plastic that contains a black pigment produced through the partial or incomplete combustion of hydrocarbons (colloquially referred to as “carbon black”) and plastic that contains any additive that, through oxidation, leads to chemical decomposition or to the fragmentation of the plastic material into micro-fragments (colloquially referred to as “oxo-degradable”). While the City supports the expanded scope of the federal regulations, the municipal ban on serviceware will be limited to foam. Administration has considered the draft regulations in the development of this plan and proposed bylaw direction.

Regulatory Trends

Nearly 100 local governments in Canada have enacted bylaws to prohibit or restrict SUI items. Most commonly, these regulations affect the sale and distribution of plastic bags, however several local governments have also enacted bylaws prohibiting or restricting other SUI such as plastic straws, styrofoam and takeout containers.

Globally, regulations on single-use items vary considerably in their comprehensiveness, with the majority of regulations focused on the elimination of foam and plastic bags. As of 2018, about 66 per cent of the countries in the world had regulated the distribution of free plastic shopping bags.⁷

Governments that have regulated single-use items use a range of approaches. The diagram in Figure B1 illustrates the types of approaches to regulating SUI that were identified in the jurisdictional scan conducted while developing this plan.

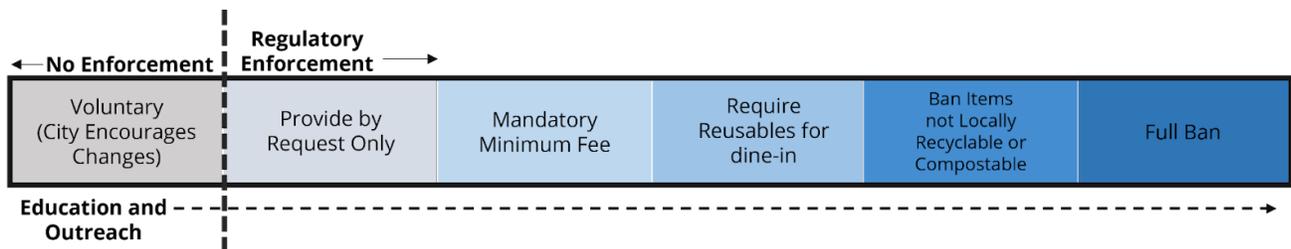


Figure B1. Types of approaches to regulating SUI

⁷ [Single-use plastic bags and their alternatives: Recommendations from Life Cycle Assessments](#)

There is also mounting pressure from the international industry and business community to introduce a legally binding UN treaty on plastic pollution. Early discussions on the proposed treaty recognize the role plastics play in the economy, and the need to keep them out of the environment. Tactics may include reducing virgin plastic use, decoupling plastic production from fossil fuels, setting enabling conditions for a circular plastics economy to operate at scale, and developing a governance structure to ensure countries participate and comply. This action is significant because it is the first example of influential industry leaders advocating for a comprehensive and binding policy on plastic pollution. Industry's adoption of this position provides policymakers with a signal that industry is receptive to policies to reduce plastic pollution.⁸

Industry-Led Initiatives

Canada Plastics Pact

The Canada Plastics Pact (CPP) is a platform for multi-stakeholder collaboration and industry-led innovation that unites leaders in Canada's plastics value chain behind a common vision and ambitious goals to address plastic packaging waste at source. The CPP has set the following targets for 2025:

- Define a list of plastic packaging that is to be designated as problematic or unnecessary, and take measures to eliminate them;
- All plastic packaging designed to be reusable, recyclable or compostable;
- 50 per cent of plastic packaging is effectively recycled or composted; and
- 30 per cent recycled content across all plastic packaging.

By eliminating some types of plastic from the waste stream, the proper management of the remaining streamlined set of plastics can be more efficient and effective. Members of the CPP include major plastics producers and retailers such as Canadian Tire Corporation, Coca-Cola Canada, Colgate-Palmolive Company, Kraft Heinz Canada, Save-on-Foods, Unilever Canada and Walmart Canada.

The City of Edmonton, along with a small number of local governments and various not-for-profit organizations, is an implementation partner of the CPP.

⁸ [Businesses send powerful signal to UN on need for legally binding plastic pollution treaty](#)

Recycling Council of Alberta

The Recycling Council of Alberta (RCA) is a member-based organization with a mission to promote, facilitate and advocate for a Circular Economy in Alberta through waste reduction and resource conservation. The RCA prioritizes the elimination of problematic or unnecessary plastic packaging through redesign, innovation and new delivery models, and the reduction of single-use packaging through application of reuse models. The City of Edmonton is a member of the RCA.

Voluntary Retailer Actions

Many retailers have implemented voluntary restrictions on checkout bags and other single-use items. Examples include the elimination of plastic checkout bags (including major retailers such as Sobeys and Walmart), fees for paper and reusable bags, elimination of straws, providing utensils by request only, elimination of styrofoam, and discounts for reusable cups and bags. Retailers who have implemented these changes ahead of the municipal plan and bylaw are leaders who recognize their power to drive change.

Reusables as a Service

Businesses are emerging that focus on making reusables easy and affordable for both businesses and consumers. Using various business models, these innovators supply, manage and clean reusable containers in a cost effective manner. The emergence of these businesses indicates a growing demand for reusables as an alternative to disposables, and is an example of the creativity that can be harnessed to implement this plan. While these services are becoming increasingly common in large cities across North America and Europe, there are no such services in Edmonton at this time. The adoption of Edmonton's Plan to Reduce Single-use Items is expected to attract investment in models that increase access to reusable cups and takeout containers.

Appendix C - Waste Hierarchy and the Role of Compostable SUI

As noted in the body of the SUI Plan, preference is given to eliminating or reducing SUI by using them only when necessary. After reduction, the next priority is given to replacing SUI with reusable alternatives. Switching to reusable items supports the development of a circular economy. A circular economy makes efficient use of resources by reusing products again and again before recycling them at the end of their useful lives. Any items that cannot be replaced with reusables should be recyclable in the local recycling system. Recyclable items that contain recycled content are also preferable, as they help to drive the establishment of viable recycling markets and limit the impacts of producing raw materials.

In some jurisdictions, certified compostable SUI are promoted as a solution. In Edmonton, the majority of the public and private processing facilities established to date are not able to effectively compost SUI, including those labeled as “certified compostable”. In the case of compostable bags for organics, Edmonton determined that participation in the organics collection program would increase if certified compostable bags were allowed, because of the role they play in reducing the “yuck factor”. The certified compostable bags are screened out and managed as contamination at the City’s processing facilities. In addition to not being compatible with local processing facilities, certified compostable products typically have larger impacts than their conventional counterparts when considered on a life cycle basis, even if the compostable items are composted and the conventional items are landfilled.^{9,10} This is due to the significant upstream/production impacts associated with compostable materials.

When recyclable alternatives are not available, SUI should be disposed of in the garbage stream (referred to as “residuals management” in Figure 1). Edmonton’s waste processing system includes a facility capable of producing refuse derived fuel (RDF), which can be used to replace traditional fuels in cement kilns and other industrial applications. SUI that have not been eliminated, replaced with reusables, or recycled, and that are disposed of in the residential garbage stream can be used as feedstock to make RDF. SUI made of compostable materials and/or alternative plastics (oxo-degradable, photodegradable, biodegradable, and compostable, and which can be made from fossil resources or biogenic resources) are also suitable for RDF production.

⁹ [The Significance of Environmental Attributes as Indicators of the Life Cycle Environmental Impacts of Packaging and Food Service](#)

¹⁰ [COMPOSTABLE – How well does it predict the life cycle environmental impacts of packaging and food service ware](#)