The reuse policy playbook

A policy roadmap to reuse

Upstream

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Foreword

This Reusable Policy Playbook is for changemakers – the community activists and policy makers who are ready to tackle the throw-away culture and create a future where both people and the planet are treated as *indisposable*. In communities across the globe, changemakers are already working to end the linear take-make-waste model of consumption. There is increasing recognition that using products for just a few minutes before they become waste is not a sustainable form of consumption for a planet of 7 billion people and growing.

Too often, the impacts of disposability disproportionately burden people of color and low-income communities who live on the fence lines of the extraction, manufacturing, and disposal industries. Extracting hydrocarbons, metals, and trees from the earth and turning them into throw-away packaging pollutes air, water, and habitat with accompanying impacts on community fabric and long-term human health. This pollution is the alarming evidence that fenceline communities are being treated as disposable.

Reducing product consumption reduces the associated negative climate, natural resources, pollution, wildlife and human health impacts. When consumption reduction is achieved by replacing the throw-away model with reusable packaging systems, it creates more local jobs and community economic benefits than when disposable packaging is manufactured far away from the consumer. While it is important to ensure that reuse services and systems are located in all communities, they should be prioritized in impacted communities in order to ensure that the environmental, health, and economic benefits of reuse programs flow not just to more privileged communities.

The plastic pollution and climate crises are real, urgent, and require immediate solutions. Our goal is to significantly change the throw-away culture. The good news is that community and business leaders, as well as legislators at all levels of government, are looking for solutions to waste and plastic pollution problems and the climate crisis. The innovation has already begun. New laws are being enacted to reduce throw-away packaging alongside exciting innovation in how products are delivered to consumers. From big brands to small start-ups, returnable, reusable, and refillable food and beverage delivery systems are becoming available in cities across the globe.

This Playbook offers policy models and strategies to accelerate change as quickly as possible. Some of the models are ones that we at Upstream have co-created with our partners and enacted as first of their kind local ordinances, and others are examples drawn from other places, created by like-minded solutioneers. Scattered through the Playbook are examples of new reduce/reuse business systems that help to visualize the types of innovation that can be accelerated through policy and consumer pressure.

We are excited to offer this Playbook to share these strategies and policy models. Our hope is that it will support and inspire you as you work to create indisposable communities.

Matt Prindiville, Upstream CEO

indisposable

[in-dih-**spoh**-*zuh*-b*uh*l], *Adjective*

Important, necessary, irreplaceable, not intended to be thrown away after use.

Executive Summary

Using policy to transform the throw-away culture

Across the globe, lawmakers are responding to urgent calls to solve the plastic pollution crisis by banning throw-away plastics. But banning plastic doesn't change the reliance on throw-away products – it shifts consumption to other disposable materials that impact the planet and human health in other ways, resulting in "regrettable substitution." Trading disposable plastic for single-use paper, aluminum, or plant-based fibers can result in greater climate impacts, water and air pollution, loss of biodiversity, and the use of different sets of toxic chemicals, depending on the specific products involved.

Better solutions lie in focusing on the top 2Rs of the *Reduce, Reuse, Recycle* hierarchy. Reduce and Reuse are the keys to preventing waste before it's created and the tools by which we can transform throw-away culture and build something better in its place.

The good news is that reducing disposables and transitioning to reuse is not only good for the planet but also saves business and government money. We estimate that the benefits in the U.S. from this transition include:

- 86% of the 1 trillion disposable foodware items used would be eliminated, reducing waste by 7.5 million tons;
- Waste management costs for business and local government (i.e. taxpayers) would be reduced by over $5.1 billion;
- Over 17 billion pieces of litter would be prevented resulting in reducing the $11.5 billion currently spent by businesses and the government on litter cleanup; and
- 193,000 jobs would be created in the new reuse economy.

This Playbook focuses mostly on policies to reduce disposable foodware – i.e. the packaging used to deliver prepared meals and beverages to consumers, such as dishes, containers, cups, and utensils. However, this Playbook also offers policies to create a reuse economy in the following sectors: bottled beverage, consumer goods (groceries, household cleaning products, and personal care products), and e-commerce.

Source Reduction as a Stand-Alone Policy

State legislation and regulations often emphasize diverting waste from landfills through recycling and composting. The approach offered here avoids thinking about how to manage waste once it's created and instead prioritizes preventing waste from being generated in the first place. This is known as "source reduction" in regulatory parlance.

Recent state policy proposals, like the California Circular Economy and Plastic Pollution Reduction Act of 2020, have attempted to include source reduction. The bills (SB 54 and AB 1080) establish a comprehensive framework for the state to meet its existing goal of diverting 75% of waste from landfill through source reduction, recycling, and composting of packaging and foodware by 2032. But this approach misses the point that source reduction must be a separate goal from recycling and composting, with separate and specific enforceable targets. Otherwise, producers and regulators will continue to focus largely on recycling and compost, the strategies that are familiar and don't require huge shifts in infrastructure or funding.

The policy approaches in this Playbook are organized by priority of actions. The first priority is to reduce as much disposable stuff as possible. Then rest should be transitioned to reusable and refillable formats. Therefore, the Playbook strategies are organized in two sections:

Reduce. Eliminate the unnecessary stuff.

Reuse. Make reuse and refill the norm.

Defining Reusable

Any reuse policy will require a definition that provides clear criteria for what is "reusable." Three factors should be considered in developing a definition for reusable foodware products.

1. **Designed for Durability.** The following numeric design standards are based on review of Life-Cycle Analyses (LCAs) for various disposable versus reusable foodware products. LCAs are the most common tools used for assessing the life-cycle impacts of products from cradle to grave. But LCAs do not evaluate all environmental impacts including some of the most important impacts of packaging and disposable foodware, such as marine plastic pollution and the impacts of plastics and chemicals in packaging on human health. Furthermore, because the input assumptions and output results of LCAs can vary significantly, these numbers are broad-brush generalizations and are likely not to be adequate in all cases. To ensure that all environmental impacts are adequately considered and that benefits of reusables exceed rather than merely break-even with disposables, Upstream suggests a factor of 25% higher than the average break-even points for the following products:
   - Cups: a minimum of 125 uses
   - Utensils: a minimum of 3 uses
   - Plates: a minimum of 63 uses
   - Clamshells: a minimum of 50 uses
   - Glass and plastic bottles: a minimum of 20 uses
2. **Actually reused.** In a reuse system, it is possible to measure the number of returns or refills to ensure that the package is actually being reused or refilled. A third-party certification will be required to demonstrate that products in a reuse system meet a minimum overall return or refill rate – we suggest 80% and that the products are on average reused at a minimum to meet the number of uses specified above.

3. **Non-toxic.** Many chemicals linked to serious health concerns are present in both single-use and reusable packaging. It is important to choose materials for reusable packaging and foodware wisely to minimize harmful chemicals.

Tools in the Policy Toolbox

The policies suggested in this Playbook use a variety of tools to prioritize source reduction, including:

- Deposits and other economic incentives for return and reuse.
- Regulatory targets based on rates and dates – specific rates of reuse or reduction by specific dates create specific enforceable metrics and accountability.
- Bans that prohibit specific products, toxic chemicals, or problematic materials in products.
- Mandates for reuse that specifically require reusable or refillable options to be provided to customers.
- Consumer charges, taxes, and fees, on disposable products, designed to create economic incentives for consumers to choose a reusable or unpackaged alternative.
- Tax incentives for businesses that offer reusable options.
- Extended Producer Responsibility that requires producers and/or retailers to take responsibility for a variety of impacts, both upstream and downstream, associated with their products.
- Removing regulatory barriers to using reusable products such as food safety codes that prohibit reusables or bottle deposit programs that don't allow refillable bottles to participate.

Strategies and Specific Policies to Support Them

This Playbook includes seven strategies for reducing disposable packaging and incentivizing reusables. Each strategy is accompanied by specific policy approaches. These strategies are also accompanied by model policies in some cases, examples of the kinds of business innovation that the policies will help to accelerate, and additional resources to support policy initiatives.

Strategy #1: Reduce as much Disposable as Possible.

1.1 Sector-wide targets for reduction

Measurable reduction can be achieved by eliminating unnecessary packaging. Producers, retailers, and e-commerce vendors in each of these sectors should achieve these reductions:

- Food and beverage service (onsite dining, take-out, delivery, events)
- Beverage industry (alcoholic and nonalcoholic beverages, such as water, soft drinks, milk, and milk alternatives)
- E-Commerce/Transport packaging (both business to business and business to customer)
- Consumer goods (household cleaning/ maintenance, personal care)

We recommend a series of rates and dates starting with 10% within 2 years of policy enactment, reaching 50% within 10 years.

1.2 Bans on throw-away packaging products

A variety of such bans exist – from the California and New York state bans on disposable hotel toiletry containers, to disposable foodware in food service operations in Chile, to bans on disposable cups at government facilities in Scotland and cities in Ireland, various jurisdictions are innovating in this area.

1.3 Accessories on request – #SkiptheStuff legislation

Too often with delivery and take-out foodservice customers receive straws, utensils, napkins, condiment packets, and other accessory items they don't want or need. To date, over thirty local jurisdictions, including Los Angeles, Washington, D.C. and Denver, have enacted policies that require food businesses to ask first before providing customers with foodware accessories. Most are in California. Two states have enacted accessories on request for all material types: California (AB 1276-Carillo) and Washington State (SB 5022-Das).

See model language here.

Strategy #2: Transition the Rest to Reusable and Refillable

2.1 Sector-wide targets for reusable packaging

Similar to the proposed reduction targets in Strategy #1, this policy proposes a requirement that the packaging that isn't reduced be transitioned to refillable/reusable formats using the same series of rates and dates for reuse as for reduction: 10% within 2 years of policy enactment to 50% within 10 years.

Germany is serious about reuse and refill

The German VerpackG2 has been in effect since July 3, 2021 and requires that 70% of beverages be sold in refillable packaging and distributors of throw-away plastic food packaging. Additionally, throw-away beverage cups must, as of January 1, 2023, offer the same goods that are offered in one way packaging also in reusable packaging and at an equal or lower cost with the non-reusable packaging.

2.2 Only reusable foodware for onsite dining

First enacted in the Berkeley Single Use Foodware and Litter Reduction Ordinance, California in January 2019, this provision was set to be implemented in July 2020 but was put on hold due to COVID-19. Countries and cities across the globe are adding reusables for onsite dining to their plastic pollution policies, including five U.S. cities, and Chile, Navarra and the Balearic Islands in Spain, Seoul, and France (for fast food).

2.3 Consumer charges for throw-away cups and containers, plus mandatory reuse

Berkeley's January 2019 Single-Use Foodware and Litter Reduction ordinance was the first policy in the world to enact a mandatory consumer charge for take-out throw-away cups city-wide. Now several California cities as well as Vancouver, B.C. have enacted charges on cups and a few also charge for containers and utensils. The Upstream Model Policy adds a requirement that retailers who offer take-out food or beverages in disposable foodware must also provide customers with a returnable reusable cup or food container, at a lower cost to the disposable, as an option to avoid the disposable charge. This requirement is added to prevent retailers from promoting only the disposable option in order to make money from customer charges.

2.4 Reuse at government workplaces and events

The San Francisco foodware ordinance requires event producers on City property to promote or provide reusable beverage containers to at least 10% of attendees. Some festivals and events are transitioning to 100% reusable, including Outside Lands in San Francisco. Using a phased approach (25% in 2 years, 50% in 4 years, etc.), 100% reuse at events is achievable.

2.5 Reuse in government procurement

Leveraging the purchasing power of government can have enormous impact. Prioritizing reduce, reuse, and repair should be at the core of government procurement policies. Agencies can specify purchase and use of reusable products for government meetings, events, and offices and prohibit the purchasing of specific throw-away items such as disposable beverage and foodware containers. Agencies can also incorporate repairability into procurement.

Strategy #3: Hold Producers Accountable – An EPR Model Policy

Extended Producer Responsibility (EPR) for packaging generally holds producers responsible – either financially or logistically – for taking back and managing their products once they become waste. Intended to promote waste prevention, no EPR packaging policy has truly succeeded in reducing packaging waste generation because the targets and performance metrics set in EPR packaging laws generally focus on recycling and recovery. To build packaging prevention (i.e. source reduction) into state EPR legislation, policies should:

- set targets for reduction and reuse (minimum 50% within 10 years);
- include a robust, unit-based system of measurement;
- include eco-modulation of fees such that less-packaged products and those delivered in refillable or reusable formats cost producers less, or nothing at all;
- ensure high return rates – a minimum of 80%; and
- ensure equitable access in all communities to reuse and reduce systems through investment in infrastructure for reuse and refill systems.

Strategy #4: Use a Justice and Equity Lens in Building the Policies

Historically, vulnerable communities have not been included in the development of policies that directly impact them. Policymakers and advocates should prioritize building and strengthening relationships with local organizers to support them and their work, and ensure local organizers are included within the development of reuse policies. Policymakers should employ policy strategies that are inclusive and require diverse community participation. Leadership should commit resources to allow the time and space necessary for the development of meaningful relationships, and prioritize inviting various groups to the table as equal partners to help shape policy. Resources must be targeted to enable community partners to participate. The focus should be on creating policies rooted in anti-racist concepts and the goals should include creating reuse policies that support a 'Just Transition' from an extractive economy to a regenerative economy.

Strategy #5: Provide Economic Support and Incentives for Businesses

Government can stimulate a transition to reusable and refillable through tax incentive programs, technical assistance for businesses, and grants to businesses, non-profits organizations, and other government entities. Many such programs exist. Upstream maintains a living library of grants and technical assistance programs that support reuse.

Strategy #6: Add Some Precautions for Disposable Foodware

6.1 Only specify recyclable or compostable that works locally

There is a significant gap between packaging that is technically recyclable or compostable and what actually gets recycled or composted in a local waste management program. The truth is that very little foodware ever gets recycled because it is too contaminated for most recyclers. The best approach for local governments is to mandate that disposable foodware will be managed in a manner consistent with the capabilities of the local recycling and compost systems.

6.2 Ban priority classes of chemicals in foodware

There is significant and increasing scientific consensus that the U.S. and most other countries lack truly effective regulations to protect public health from toxic chemicals in our foodware and food packaging. Unfortunately, many of these products are known to contain harmful "Chemicals of Concern" that not only can migrate out of foodware and into the food and beverages we consume, but also have significant impacts on workers, frontline communities and the environment when these products are made and disposed of. We simply don't need to have chemicals linked to cancer, reproductive harm, hormone disruption, or other health problems in our foodware. But banning single toxic chemicals is ineffective when the industry tends to replace them with very similar compounds with similar health effects. For this reason, many scientists and health experts recommend eliminating entire classes of Chemicals of Concern – such as all bisphenols, rather than just Bisphenol A – in order to prevent what has become known as "regrettable substitution." Such bans can be incorporated into any of the policies provided in this Playbook and are included in Upstream's Model Policy.

Ban List: High Priority Chemicals for Food Packaging

- Ortho-phthalates
- Bisphenols
- Per and polyfluoralkyl substances (PFAS)
- Styrene
- Lead and lead compounds
- Cadmium
- Mercury
- Hexavalent chromium and compounds
- Perchlorate
- Benzophenone and its derivatives
- Formaldehyde
- Halogenated flame retardants
- Toluene

6.3 Ban priority materials of concern in disposable foodware

In addition to priority chemicals and chemical classes, some materials themselves pose too high of a health, environmental and/or life-cycle concern to continue to be allowed in foodware. Polystyrene cups with less toxic chemical additives, for example, will still have serious environmental and health impacts; to prevent harm, the material polystyrene must be entirely phased out from foodware.

Strategy #7: Ensure a Transition to Non-Toxic Reusables

While some materials frequently used for reusable foodware, such as glass and stainless steel, are generally less toxic than plastic and other disposable materials, there are some reusable materials that warrant caution or should be avoided in choosing reusable products. From lead in some ceramics to orthophthalates in gaskets and closures of glass and stainless steel, to formaldehyde in reusable melamine plastics, not all reusables are safe. The list of Chemicals of Concern and Materials of Concern provided in Section 6 should be applied to reusables as well. No reusables should be offered for sale or manufactured that contain any of these listed chemicals or materials.

Ban List: High Priority Materials from Disposable Food Packaging

- Polyvinyl chloride
- Polystyrene
- Bamboo that uses resin or another for of binding agent that contains Polyvinyl Chloride, Polycarbonate, Melamine, or a High Priority Chemical

Ban List: Reusable Foodware Materials to Avoid

- **Polyvinyl chloride**: made from vinyl chloride, a known human carcinogen.
- **Polycarbonate**: made from the endocrine disrupting compounds known as bisphenols, including Bisphenol A, which is listed on California's Prop 65 as harmful to the female reproductive system.
- **Melamine**: made from formaldehyde, a known human carcinogen.
- **Certain kinds of bamboo products**: avoid any bamboo material that uses resin or other binding agent containing PVC, polycarbonate, melamine or a High Priority Chemical

Section 1:

Using Policy to Hack the Throw-Away Culture

Disposable plastic products treat both our planet and its inhabitants as disposable. They propel climate change, posing an existential threat to our survival, and wreak havoc on our health all across their life-cycle. They are filling the oceans, the air we breathe, and the food and water we consume with plastic, causing devastating impacts to the environment and our health in ways we are only beginning to understand.

But simply eliminating the plastic and using alternative disposable products made from paper, agricultural fibers, aluminum, or bio-based plastics creates other significant environmental and human health impacts, like depletion of forests, pollution of waterways, contamination of soils and crops, increased carbon emissions, and increased water and energy consumption. And that's exactly what is happening with many of the recent policies enacted to combat plastic pollution.

Across the globe, lawmakers are responding to urgent calls to solve the plastic pollution crisis by banning throw-away plastics. But banning plastic doesn't change the reliance on throw-away products and packaging; it shifts consumption to other materials used for disposable products, and impacts the planet and human health in other ways – resulting in "regrettable substitutions."

We can treat the planet and the communities that inhabit it as *indisposable* by changing how products are delivered to consumers. Focusing on waste prevention – which is embodied in the top 2Rs of the Reduce, Reuse, Recycle hierarchy – can effectively reduce the overall environmental and human health impacts of products and packaging that threaten our communities. Upstream's Reuse Wins report sheds light on the fact that reusable foodware achieves greater environmental benefits than the disposable products they replace – by every environmental measure – and reduces costs for the businesses that switch to using it.[1]

It is time for serious action to hack the "throw-away" culture that was born in the U.S. and exported to the rest of the world via television (creating the desire) and supported by globalization. Many of the solutions are based on old-school models of product delivery, while others are based on new innovations that cater to a more "on the go" lifestyle. To envision new solutions, it helps to look back and think about how the throw-away culture evolved.

Banning plastic doesn't change the reliance on throw-away products and packaging; it shifts consumption to other materials used for disposable products, and impacts the planet and human health in other ways.

The Making of our Throw-Away Culture

Prior to World War II, Americans purchased goods from local growers and makers. During the war, producing the goods needed to support the American "war effort" required massive industrialization. Consumerism was born in post-war America from the combined growth of American cities, industrial production, and marketing.[2] Rather than buying oats scooped from a local grocer's bin, people began purchasing products like packaged Cornflakes™.[3]

In pre-war America, manufacturers staked their reputations on how long products would last. After the war, new industrial designers embraced the idea of planned obsolescence and industry saw a path to increased profits.[4] In response to concerns about hygiene and also catering to the desire for convenience, throw-away packaging entered the post-war marketplace and took hold during the ensuing decades.

As reusable products were replaced with disposable formats, U.S. household waste generation increased from 2.68 pounds per person per day in 1960 to 4.9 in 2018,[5] even as plastics increasingly replaced glass and metal causing a light-weighting of the waste stream. According to EPA, containers and packaging comprise the largest portion of municipal solid waste generation in the U.S. – at 28%[6] (see table #1[7]). The U.S. represents 4% of the world's population but generates 12% of global municipal solid waste – generating four times the global average of per capita waste.[8]

In the 1960s and onward, companies like Coca-Cola, Pepsi and McDonald's got in the business of selling products in no return, one-way packaging in order to reduce costs, thereby shifting the financial and economic burden of managing the packaging to tax-payers and local government. Touted as part of the new culture of convenience, throw-away products led to dramatic increases in waste generation and changed the materials composition of the waste stream increasingly to plastic over time.

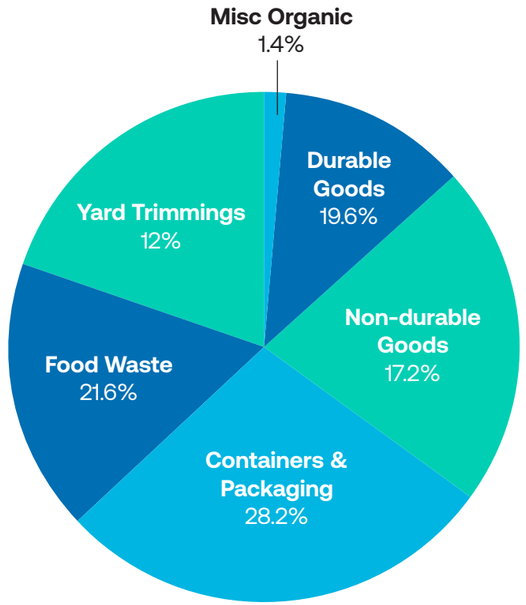
These days, brands associated with marine plastic pollution are finding single-use plastic to be a reputational liability, especially when the package so easily winds up as litter in the environment and world-wide cleanup data calls them out as the world's largest plastic polluters.[9] In response, some of these brands are exploring new business models, like LoopStore™, where products are offered in refillable, returnable packaging and profit is tied to selling only the goods in the package.

But the efforts to pilot returnable, reusable delivery systems are not nearly bold enough and the incentives to invest in them are not adequate to change consumption systems fast enough to address the current climate and plastic crises. It's time for policy-makers to step in and accelerate the change. Bold action is needed to hold producers and retailers accountable for offering new ways of getting consumers what they want and need, without all the waste.

Containers and packaging comprise the largest portion of municipal solid waste generation in the U.S. – at 28%. The U.S. represents 4% of the world's population but generates 12% of global municipal solid waste – four times the global average of per capita waste.

Table 1:

US MSW 2018 Products Generated
Millions of tons



The Nomenclature of Throw-Away Products

Terms like "throw-away," "disposable," and "single-use" are often used interchangeably. But they can be interpreted differently by different audiences. In this document, we use "throw-away" and "disposable" interchangeably, as we feel most people interpret them the same way and these are common terms used in American English vernacular. However, there can be a vast difference between "single-use" and "throw-away" or "disposablereusable." For example, two uses or even five would not meet our proposed definition of "reusable" for products listed in this report, but they aren't "single-use" either. Therefore, we do not use the term "single-use" when referring to "throw-away" or "disposable" products.

In legislative definitions, however, we recommend against using all three terms, including "throw-away," or "disposable," and/or "single-use," when referring to "disposable" or "throw-away" products. Rather, we suggest that products that don't meet the legislative definition of "reusable" should only be referred to as "non-reusable." This eliminates completely any potential confusion for the regulated industries as to what is reusable and what is not.

Focusing First on Foodware and Beverage Bottles

The policies provided in this Playbook primarily focus on reducing disposable foodware – i.e. the packaging used to deliver prepared meals and beverages to consumers, such as dishes, containers, cups, and utensils.[10] However, there are a variety of business sectors that are heavy contributors to the throw-away culture – from the bottled beverage industry, consumer goods (packaged food, household cleaning products, and personal care products) manufacturers, to shipping packaging that arrives frequently at your door. This Playbook offers some policies aimed at reducing disposable packaging in all business sectors, but the vast majority of the packaging source reduction policy innovations that Upstream has iterated to date are focused on disposable foodware. We chose to focus first on disposable foodware before moving on to other sectors for these reasons:

Foodware and single-use beverage bottles are the iconic symbols of our throw-away culture. It is the most recognizable form of disposability in U.S. culture – one that has been exported across the globe. Radically transforming the ways in which on-the-go food and beverages are delivered to consumers signals deep rethinking of the culture of convenience and disposability. Changing these sectors can create significant societal impact.

Food and beverage products are a significant source of marine plastic pollution. Since the inception of the International Coastal Cleanup in 1991, food and beverage packaging has dominated the top dozen or top 10 items collected. For example, of the top 10 products in the 2019 ICC dataset, 8 are food and beverage packaging products.[11] The BanList 2.0 reviewed clean up data (limited only to plastic items) in the U.S. from marine litter and coastal cleanup studies that showed similar results – most of it is food packaging.[12] And in the three-year history of the Break Free From Plastic Brand Audit, food and beverage packaging has ranked #1 among plastic pollution of beaches and shorelines worldwide.[13] Keep America Beautiful's most recent national litter study shows food and beverage packaging and smoking-related litter to be the biggest contributors to the U.S. litter problem.[14]

It's an environmental justice priority. Forty-two percent of non-fiber plastics are used to make packaging.[15] People who live on the fenceline of facilities associated with the extraction, production, and incineration of plastics are disproportionately impacted by the toxic air emissions of these industries as well as the pollution of waterways from wastewater associated with oil and gas extraction.[16] And people who live in food deserts, where access to fresh, unpackaged, and unprocessed food is limited, are disproportionately impacted by chemicals associated with food packaging.[17]

Foodware: the packaging used to deliver prepared meals and beverages to consumers, such as dishes, containers, cups, and utensils.

It's a climate issue. The portion of greenhouse gas emissions associated with the consumption of throw-away foodware is greatly underestimated. The greenhouse gas emissions from throw-away foodware dwarf those from reusables once the reusables have been used a certain number of times (the break-even point).[18]

Disposable foodware has no real place in a circular economy. It's often made from hard to recycle plastics, paper, and multi-material packaging that is hard to separate and when contaminated with food, recyclable packaging is sent to landfill and incineration. Compostable foodware is also a challenge. Even if compostable in a laboratory setting, compostable foodware is often hard to compost in practice. Very few commercial compost facilities accept compostable foodware because it often takes too long to decompose. Residual particles and chemicals that leach from the packaging cause contamination that reduce the value of the compost. Compost can be contaminated not just by packaging materials, like compostable plastic, but also by the chemical additives in food packaging that are known to migrate from the packaging into compost.[19]

Reducing Disposable Foodware Saves Money

Restaurants in the U.S. spend an estimated $24 billion per year purchasing 1 trillion pieces of disposable foodware, which generates nearly 9 million tons of waste per year. Most of the disposable foodware (79%) is for takeout and delivery, only 21% is for onsite dining.[20] Replacing just 20% of throw-away plastic packaging with reusable alternatives is estimated to be a $10 billion cost-savings opportunity for businesses.[21] With a maximum transition to reuse (100% of onsite dining was reusable, and all the urban areas of the U.S. had 100% reuse for take-out in this new reuse economy), the following benefits would accrue for California, which encompasses 12% of the U.S. population:

- 86% of the 1 trillion disposable foodware items used would be eliminated, reducing waste by 7.5 million tons;
- Waste management costs for business and local government (i.e. taxpayers) would be reduced by over $5.1 billion;
- Over 17 billion pieces of litter would be prevented resulting in reducing the $11.5 billion currently spent by businesses and the government on litter cleanup; and
- 193,000 jobs would be created in the new reuse economy.[22]

Clean Water Fund's ReThink Disposable program provides the data and numerous case studies to demonstrate that reuse saves food business operators money. Based on data from over 120 business participants, cost savings for small food businesses generally range between $3,000-$22,000 per year, while the environmental impacts include an elimination of 110,000-225,000 packaging items and a reduction of 1,300–2,200 pounds of waste per business. **Net cost savings are usually realized within a few months and always within a year,** taking into account costs for purchasing reusable products and the water and energy associated with dishwashing.[23]

Section 2:

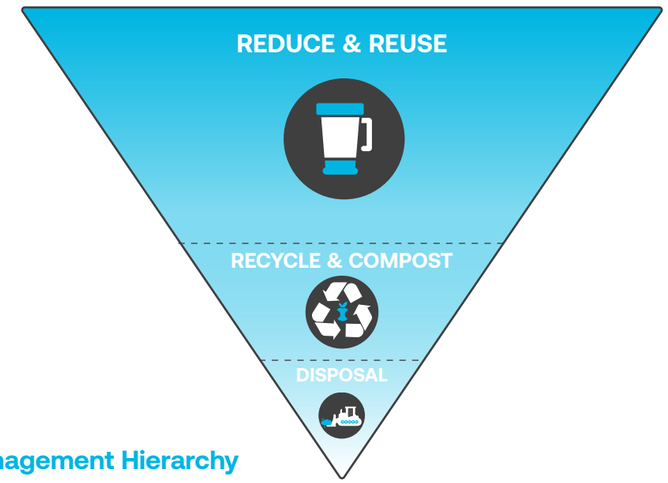
The Reuse Policy Playbook

Changing the throw-away culture requires significantly rethinking the decades-old regulatory approach of diverting waste from landfill that has been applied to tackle solid waste. The waste diversion approach that was integrated in the 1980s failed to focus on waste *prevention*. Focusing on diversion from landfill meant a focus mostly on recycling and, in turn, the focus on recycling enabled a thriving and ever-expanding marketplace for throw-away products. For too long, waste advocates, regulators, and policymakers have failed to prioritize the top tiers of the solid waste management hierarchy – **Reduce and Reuse**.

Source Reduction as a Stand-Alone Policy

For decades, the federal government and states have expressed a hierarchy of waste management actions as a hierarchical pyramid of the 3Rs – Reduce, Reuse, Recycle. While there are many versions of this pyramid, most prioritize Reduce and Reuse over Recycle and disposal (landfill and incineration) because reducing the amount of waste generated and reuse means less waste to recycle. Reducing consumption through product avoidance leads to significant reduction of greenhouse gas emissions, resource depletion, and pollution. It's an obvious win for the environment and saves local governments and taxpayers money on having to clean up and dispose of waste.

But the U.S. is stuck in a *waste management* – as opposed to a *waste prevention* – paradigm. For instance, California's primary solid waste regulatory program – AB 939 (Sher), the California Integrated Waste Management Act of 1989 – established regulations that require municipalities to divert 50% of waste from landfill or incineration via source reduction, recycling, and composting. Compliance is based on measuring how much less waste enters landfill and incineration compared to the baseline measure, not how much less waste is generated in the first place. Therefore, there is no target or performance metric for waste prevention. While jurisdictions report on source reduction, there is no separate required report on how much waste was eliminated at the source and no numeric target to be achieved in waste elimination at the source (i.e. no prevention requirement). AB 341 (Chesbro), enacted in 2011, set a "goal" that 75% of solid waste generated would be diverted from landfill by 2020, still perpetuating a system



Waste Management Hierarchy

that focuses on what to do with waste once it is generated.

The policy approaches in this Playbook are organized by priority of actions. First, reduce as much disposable stuff as possible. Then transition the rest to reusable and refillable. In essence, the goals are to:

REDUCE: eliminate the unnecessary stuff

REUSE: make *reuse* and *refill* the norm

Defining "Reusable"

The state of California's regulations implementing SB 1335 (Allen) – the Sustainable Packaging for the State of California Act of 2018 – defines reusable packaging as that which:

> maintains its shape, structure, and function after 750 cycles in a cleaning and sanitizing process...as demonstrated by a third-party certification, or the manufacturer of the foodservice packaging item provides an express warranty that the foodservice packaging item can be reused for its intended purpose for a minimum of one year, or the manufacturer will take back and replace the item at the manufacturer's expense.[24]

Several local ordinances designed to promote reusable cups have defined reuse based on the number of wash cycles the product is designed to last for. Bill #22596 in Bellingham, WA (2021) and a proposed foodware reduction ordinance in San Francisco state that cups and containers used for in-house dining must be designed for 1,000 sanitation cycles, based on state food safety washing requirements. For San Francisco's ordinance requiring reusable cups at events, the "reusable" definition specifies that they must be designed for 100 cycles.

The problem with all of these definitions is that they risk repeating the problem with California's definition of reusable bags – that is, that a design standard does not ensure that a product will in practice be reused. Thicker, more durable products used only once are more harmful to the environment than the lightweight products they are designed to replace.

Reuse definitions must ensure that the products will actually be reused an adequate number of times to ensure that the reusable product exceeds the life-cycle impacts break-even point with the disposable product it replaces.

Three key factors should be considered in developing a definition for reusable foodware products.

1. **Designed for Durability.** We recommend requiring a **design standard** that sends a signal to the marketplace to move towards higher durability and higher reuse. Upstream's "Reuse Wins" report reviewed the Life-cycle Assessments (LCAs) of a variety of throw-away vs. reusable products.[25] Averaging the break-even points for different foodware items made from different materials, as cited in the various LCA studies, we derived the following generalized break-even points for specific products:

   - Cups: 100 uses
   - Utensils: Stainless steel vs. plastic - 2 uses
   - Plates: 50 uses
   - Clamshells: 40 uses
   - Glass and plastic bottles: 20 uses

   LCAs are the most common tools used for assessing the life-cycle impacts of products from cradle to grave. But LCAs do not evaluate all environmental impacts, including some of the most important impacts of packaging and disposable foodware, such as marine plastic pollution and the impacts of plastics and chemicals in packaging on human health. Furthermore, because the input assumptions and output results of LCAs can vary significantly, these numbers are broad-brush generalizations and are likely not to be adequate in all cases.

   To ensure that all environmental impacts are adequately considered and that benefits of reusables exceed rather than merely break-even with disposables, Upstream suggests a factor of 25% higher than the average break-even points of reuse products with the environmental impacts of the disposable products they replace:

   - Cups: a minimum of 125 uses
   - Utensils: a minimum of 3 uses
   - Plates: a minimum of 63 uses
   - Clamshells: a minimum of 50 uses
   - Glass Bottles: a minimum of 13 uses

2. **Actually reused.** Some assurance needs to be integrated into the definition or criteria for what is reusable such that the reusable products are in the real world getting reused. Reuse is not possible in many sectors without the ability to properly wash and sanitize and without mechanisms to ensure customers return products for reuse. Ensuring products are actually reused requires demonstration that the products are returned for washing and redistribution, or that products reused at home are refilled.

   Whether the reusable package is part of a refill on the go, return from home, return on the go, or business to business system, the package must be returned for reuse or redistribution. For the refill at-home system, the reusable package doesn't need to be returned, but the product does need to be refilled. In each of these scenarios, it is possible to measure the number of returns or refills to ensure that the package is actually being reused or refilled.

   Some third-party certification will likely be required to certify that products in a reuse system meet a minimum overall return or refill rate – we suggest 80%. In addition, the certification will ensure that the products are on average reused at a minimum to exceed the break-even point, as specified above.

3. **Non-toxic.** Many chemicals linked to health concerns are present in both single-use and reusable packaging, and many more chemicals present haven't been sufficiently tested for safety (if they have been tested at all). M Increased transparency and disclosure regarding chemicals present in packaging are needed to ensure that all foodware is truly free of toxic chemicals. In the meantime, it is important to choose materials for reusable packaging and foodware wisely to minimize harmful chemicals. Priorities for chemical bans are specified in sections 6.2 and 7.

The Regrettable Consequences of "Reuse" Poorly Defined

First San Francisco, then the State of California in 2014, and then a host of other jurisdictions (Austin, Chicago, and Honolulu) adopted plastic bag bans that defined reusable bags as including bags made from thicker plastic. In California's SB 270 (Padilla), a grocery bag can be certified as reusable by the state if it has a handle and is capable of carrying 22 pounds over a distance of 175 feet for a minimum of 125 uses and be at least 2.25 mil thick – among other requirements regarding recyclability, recycled content, and toxic heavy metals. Stores can provide thicker plastic bags that meet these requirements (and are on the state's certified list) as a reusable bag.

But most consumers treat film plastics as disposable. These bags frequently appear as litter, whereas canvas, cloth, and even woven polypropylene bags do not. What's reusable has more to do with how consumers treat the product than design criteria. We need regulatory definitions that focus more on "actual usage" than on laboratory performance.

Types of Reuse Systems

There are four different business-to-consumer (B2C) reuse models and one business-to-business (B2B) model.

Refill at home
Users refill their reusable containers at home (for example, with refills delivered through a subscription service).

Refill on the go
Users refill their reusable containers away from home (for example, at an in-store dispensing system).

Return from home
Packaging is picked up from home by a collection service (for example, by a logistics company).

Return on the go
Users return the packaging at a store or drop-off point (for example, in a deposit return machine or a mailbox).

B2B packaging and reuse
These systems can range from individual companies reusing their own transport packaging to industry-wide reuse systems based on interconnected operators managing a shared set of standardized, reusable packaging.

Tools in the Policy Toolbox

This Playbook includes policy tools that can be used to accomplish the reduce/reuse goals. Some are appropriate at some but not all levels of government – local, state, and federal. While others can be applied at any level.

Deposits and other economic incentives for return and reuse. Ensuring that reusables are returned and actually reused is paramount to achieving the environmental benefits that reusable and refillable products can provide. Deposits and other incentives to keep packaging in the reuse loop have proven to be highly effective in DRS programs for bottles, in reusable cup and food container programs, and for collection for recycling at end of life for other products such as car batteries and electronic products.

Regulatory targets based on rates and dates. Rather than leave it up to the producers and regulators to determine how to accomplish source reduction, every policy should be clear as to how to prevent waste and - where appropriate - should include performance metrics that the regulated community must meet. The “rates and dates” approach holds producers accountable for a set amount of reductions on a specific and enforceable timeline and should be applied as often as possible. For example, a reuse/refill policy, a local, state, or federal regulation should require X% of products offered by a company or an industry sector to be delivered unpackaged, or in returnable reusable packaging by X date. Laws should also provide strong authority for regulators to enforce and levy penalties that are significant enough to achieve compliance.

Bans. Prohibiting the use of throw-away foodware is an effective waste prevention strategy. To prevent regrettable substitution of throw-away materials, like aluminum and bioplastics, the ban should apply to all throw-away products in a specified system. Similarly, ingredients or types of uses can be banned or regulated, such as specific chemical materials or additives in packaging.

Mandates for reuse. Legislation that mandates the use of specific products, such as reusables, is a direct form of regulation. For example, throw-away plastic grocery bag bans and fees on plastic bags have resulted in a transition to reusable bags, but requiring reusables could have avoided regrettable substitutes, like the increased usage of throw-away paper bags. For example, Germany recently amended its Packaging Act such that starting in 2023, cafes and restaurants must offer reusable alternatives for take-away food and beverages. In addition, reusable packaging must not be more expensive and must be taken back by the respective restaurant or café.[26] It is important that such mandates require the use of non-toxic reusables to not create any kind of “regrettable substitution.”

Consumer charges, taxes, fees. Economic signals can be effective in changing behavior. Taxes are charges levied by the government to defray the expenses of a related government function. Whereas consumer charges or fees do not compensate the government for regulatory expenses or functions because the retailer keeps the money collected.

Consumers are more motivated to change behavior in response to avoiding additional cost than in response to incentives, like discounts and loyalty programs.[27] Six months after California’s law that banned plastic bags and imposed a 10 cent paper bag fee – SB 270 (Padilla) – went into effect, there was an 85% reduction in the number of plastic bags and a 61% reduction in the number of paper bags provided to customers. Plastic bag litter in California’s Coastal Cleanup dropped from 8-10% to under 4%, due to SB270 and similar local policies.[28]

Many plastic bag fees and cup charge laws attempt to alleviate the disproportionate impacts on low-income customers by offering exemptions to those participating in government-subsidized food assistance. However, not all low-income people qualify for these programs, and some may not appreciate the stigma of having to show proof of participation in such programs.

Consumer discounts and other incentives versus charges and discounts. Social behavior research, as well as the real-world experience of disposable bag taxes or customer charges, demonstrate that discounts and loyalty programs are generally less effective in changing consumer behavior than charges and taxes. This is because people are generally more "loss-averse" – or motivated to save money – than they are interested in gains or bonuses. However, the most significant consumer behavior change can occur when either tax or a charge is combined with an incentive or bonus. For example, the greatest uptick in reusable bag use occurred when both a charge or tax on the disposable bag was combined with a discount for using a reusable bag.[29]

Tax Incentives for Businesses. Currently, businesses can access a wide array of tax credits and incentives for going green. Examples include tax credits for investing in fleets of electric cars and cars that run on biodiesel, tax credits on investments in alternative energy sources for commercial buildings, and green building tax incentives. Legislation could provide tax incentives to businesses that offer reusable options to customers, reuse services to other businesses, or unpackaged delivery systems like bulk filling stations.

Extended Producer Responsibility (EPR). First mandated by Germany in 1991, packaging EPR is a policy model that requires producers to take responsibility (physical or financial) for the products they put into the marketplace. Generally, it requires producers to recover packaging after consumption and manage the waste. But with variations in the policy design, producers can be held responsible for a variety of impacts, both upstream and downstream, associated with their products.

Removing barriers to reuse. State food safety codes can create barriers to reuse in food service. For example, AB 619 (Chiu) eliminated barriers in California's food safety regulations to the filling of customers' personal (bring your own) reusable containers for take-out meals and eliminated the requirement of disposable foodware at temporary events. In 2021, AB 962 (Kamalger) removed obstacles to refillable beverage containers participating in California's bottle deposit program. Glass bottles designated for refill won't be crushed in recycling programs and a deposit will encourage their return for refill.

Regrettable Substitutes

Eliminating plastic and allowing other throw-away materials result in substitutions that can be just as harmful, if not more so, than plastic. Examples include:

Biobased Materials (like Polylactic Acid, cellulose, and molded fiber). Usually made from agricultural products, bio-based food packaging often requires significant inputs of energy, water, and fertilizers. Bio-based foodware tends to perform worse than non-bio based foodware for eutrophication, water use, acidification, ozone depletion, particulates, land use, and toxicity potentials, and generally but not always better for global warming potential.[30] Biobased plastics also behave like petroleum-based plastics in the environment – they degrade into micro and nano plastics, never biodegrade and last for an unknown time. As they are hard to distinguish from other recyclable materials, they can contaminate recycling streams. Some research has suggested that bio-based plastics can be just as toxic as conventional plastics.[31]

Aluminum. The mining and refining of bauxite to make aluminum and the smelting process is immensely energy- and water-intensive and causes significant air, water, and soil pollution.[32] Even when aluminum contains recycled content (on average about 73%)[33], the virgin material is highly impactful. The mining and transformation of bauxite into aluminum is energy-intensive and releases perfluorocarbons that are 9,200 times more harmful than CO2 in terms of global warming.[34] Because aluminum is so energy-intensive to produce, it has a higher carbon footprint than plastic - an emissions factor of 11.09 for virgin aluminum compared to 2.2 for non-recycled PET.[35]

Paper. Three billion trees are logged each year to create paper packaging products. More than half of the paper produced globally is turned into packaging. The annual consumption of coffee cups alone requires 6.5 trees per year to produce. Only about half of paper packaging is recycled – foodware in particular has a low recycling rate due to contamination. Trees provide a range of environmental benefits, including habitat and biodiversity, soil health, clean air, and removing carbon from the atmosphere.[36] Paper used in disposable food packaging is also often coated with toxic and persistent chemicals known as PFAS.[37]

Wood. Foodware made from bamboo, used as an alternative to plastic utensils, comes from monoculture plantations that rely on forest clear-cutting and use fertilizer, herbicides, pesticides, and intensive management practices that can deplete topsoil, increase erosion, and contaminate water resources.[38] The German government has warned against the use of bamboo materials for hot meals and drinks because they can leach "harmful amounts" of melamine and formaldehyde.[39] Foodware made from birchwood and other soft wood trees supplied by China travels long distances and little is known about their forestry practices. It is unclear whether wood utensils provide environmental benefit over plastic. At least one study suggests that it does.[40]

Strategies and Specific Policies to Support Them

The policy strategies in this Playbook are based on the priorities of the solid waste hierarchy- they place reduction first, then reuse and refill. These are followed by additional important strategies for success. The following elements are outlined for each strategy:

- Policy tools;
- Key policy provisions;
- Sample model policies where available;
- Appropriate legislative body to enact the policy; and
- Real-world examples of policies enacted or of the change that such policies can achieve.

Strategy #1: Reduce as Much Disposable as Possible

Disposable bag laws are a form of reduction of throw-away packaging that has been widely embraced across the globe. Today, approximately two-thirds of countries worldwide have restricted access to throw-away plastic bags leading to a transition to reusable shopping bags.[41]

California's 150+ local jurisdiction bans started in 2007 with San Franciscobusinesses and culminated in the state-wide ban - SB 270 (Padilla) in 2014. These policies have been effective in reducing throw-away bags, driving consumers to opt for reuse, and eliminating a pernicious form of litter from California's beaches and inland waterways. But the real success of those policies is the evidence that it is possible to use policy to change the consumption behavior of several generations of business and consumers that traded the planet for convenience.

The following policy measures provide the next steps, after the plastic bag ban, in reducing throw-away products. From setting packaging reduction targets for specific industry sectors to banning specific throw-away items, these policies ensure that less throw-away packaging will be used.

Amazon Frustration-Free Packaging Program

The Amazon Frustration-Free Packaging Program certifies products as "designed and tested to ship to customers in its own packaging without the need for additional Amazon packaging. Products in Frustration-Free Packaging offer more sustainable packaging that is right-sized, reduces damages, is made of recyclable packaging materials, and is easier to open." The program works with manufacturers and brands to certify that packaging has minimum void space and does need secondary transport packaging. The program also defines minimum packaging dimensions for the EU market.

1.1 Sector-Wide Targets for Reduction

Waste reduction targets for specific sectors and specific products are necessary and require developing methods to measure reductions in the quantity of packaging entering the market. Reduction can be achieved either by eliminating unnecessary packaging or via transition to reusable and refillable systems.

◊ Key Policy Provisions

Targets. Our current recommendation, is a reduction in units of throw-away packaging of:

- 10% within 2 years of policy enactment
- 20% within 4 years
- 30% within 6 years
- 40% within 8 years
- 50% within 10 years

These reductions can be achieved by eliminating throw-away packaging or by transitioning to reuse. Producers, retailers, and e-commerce vendors in each of these sectors should achieve these reductions:

- Food and beverage service (onsite dining, take-out, delivery, events)
- Beverage industry (alcoholic beverages, water, soft drinks, milk, and milk alternatives)
- E-Commerce/Transport packaging (both business to business and business to customer)
- Consumer goods (household cleaning/ maintenance, personal care)

Measuring Reduction. To determine whether overall packaging reduction targets are being met, a clear and enforceable measurement system must be in place.

Set a baseline. The reduction target needs to be based on a baseline measurement of packaging that defines the upper limit of packaging that is acceptable. Without it, packaging waste generation can still grow as a result of economic growth and thereby increased sales, or decreases in portion sizes.

How to measure reduction. The measurement of reduction often proposed in waste legislation is weight-based. This system is likely to incentivize a transition to lighter-weight throw-away plastic rather than a decrease in throw-away altogether.[42] To prevent this regrettable outcome, the policy should require a new system of measurement for packaging reduction that is unit or item-based. Regulated entities should report to regulators on an annual basis the number of packaging items they put into commerce within the jurisdiction. A baseline report of the quantity of items must be required. Reporting of the number of units of packaging placed into commerce both as throw-away and as reusable packaging will enable an accounting of both reduction and reuse.

An alternative approach suggested by others is to require reductions by weight in each material category - plastic, paper, aluminum. The problem with this system is that it is an indirect measurement. Even if the overall weight of plastics is reduced by transitions to reusable, it is unclear how much packaging was shifted from throw-away to reusable formats and it leaves too much opportunity for gamesmanship in the accounting. There is no way to determine how well the desired outcome of overall packaging reduction and transition to reusable is being achieved.

Reduction can also be measured in terms of reducing overpackaging. In the case of foodservice, this might include the accessories on request provisions discussed below. However, overpackaging, in general, should be considered for each business sector. Overpackaging can be minimized in the following ways:

- Eliminate packaging that is unnecessary in that it serves no essential function (limit packaging to that which is necessary to protect the product and meet safety and legal requirements).
- Reduce the product to package ratio in a volumetric approach.
- Reduce void spaces.[43]

In France, the goal is to work towards a 100% reduction in unnecessary throw-away plastic packaging by December 31, 2025, defined as those that do not have an essential technical function, such as product protection, health, and integrity function, transport, or regulatory information support.[44]

Enforcement. Measuring a reduction in the number of packaging units placed into the marketplaces is relatively easy once manufacturers report the number of packaging items that they place in the market each year. Packaging reduction achieved via reduction of volume of packaging or reduction of void spaces would require a more complex system, perhaps even a certification program. The measures suggested could be monitored via random inspections by enforcement agencies. The EU is setting up a system to ensure that unnecessary packaging and packaging that serves no clear core performance function are not entering the marketplace.[45] For now, we recommend a simple, unit-based measure of reduction.

◊ Policy Tools

Reduction targets can be incorporated into either:

- **Regulatory targets** based on rates and dates – a stand alone regulation
- **Extended Producer Responsibility** (EPR) packaging legislation
- **Deposit Return Systems** (DRS), such as bottle bills.

Appropriate legislative body:

- **Regulatory Targets/Rates and Dates:** Local, state, or federal
- **EPR:** State or federal
- **DRS:** Local, state, or federal

◊ Examples

The amended U.S. Break Free From Plastic Pollution Act (BFFPP Act) of 2021 – S. 984 (Merkley) proposes a target of 15% of covered product packaging being eliminated or reusable by Dec. 31, 2030.[46] Although less ambitious than the Upstream suggested 50% within 10 year reduction, it is a similar rates and dates regulatory approach.

Several European countries have established waste reduction/prevention targets. For example, Belgium set a target of a five percent reduction of household waste production by 2023 and 20% by 2030 compared with 2018. Bulgaria aimed to have a lower amount of Municipal Solid Waste (MSW) generated in 2020 compared to 2011. Italy set a 5% reduction by 2020 compared with 2010. The Netherlands aimed to reduce household waste generation from 500kg per capita in 2014 to 400kg per capita in 2020. Romania set a 10% reduction target in 2025 compared to 2017. Spain set a 10% waste generation reduction by 2020 compared to the waste produced in 2010.[47]

In the C40 Cities' Advancing Towards Zero Waste Declaration, mayors of 26 cities have make two bold commitments to 1) reduce the municipal solid waste generation per capita by at least 15% by 2030 compared to 2015; and 2) reduce the amount of municipal solid waste disposed to landfill and incineration by at least 50% by 2030 compared to 2015, and increase the diversion rate away from landfill and incineration to at least 70% by 2030.[48]

While these EU countries and C40 cities focus on waste generation reduction overall, some NGOs call for reducing the consumption of specific products, such as throw-away foodware. This is a way to reduce the waste associated with specific products that are hard to manage once they become waste. For example, the Rethink Plastic Alliance recommended a consumption reduction target of 50% by 2025 and 80% by 2030, eventually leading to 100% elimination of throw-away cups and food containers to help build and scale reusable systems.[49] Another European NGO, Environmental Action Germany, recommends that targets be based on per capita packaging waste generation such that packaging waste decreases by 25% by 2025 and 50% by 2030 relative to the 2018 baseline generation rate of 174 kgs/person/year in the EU.[50] Specifically for throw-away cups and containers, they call for a 50% reduction 2025 and 80% by 2030.[51]

◊ Private Sector Examples

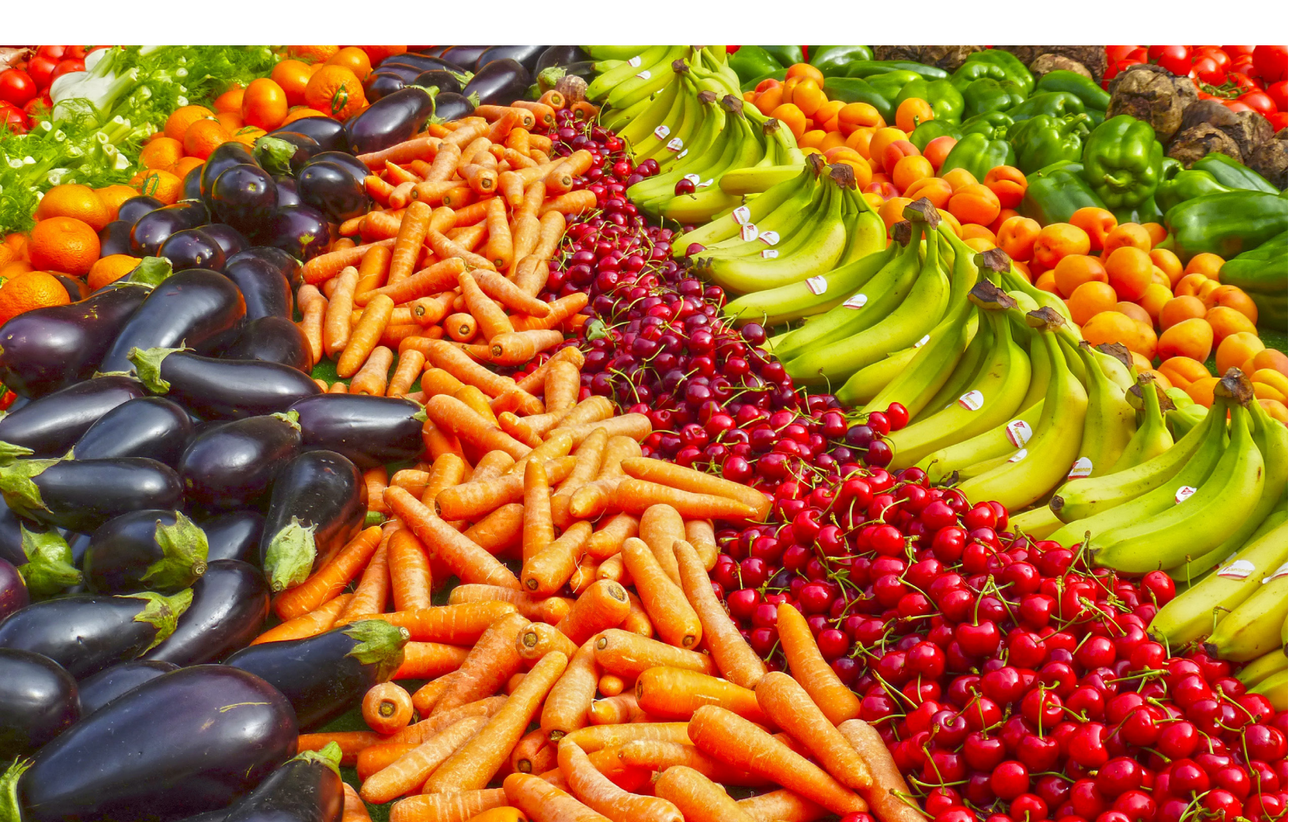
Consumer goods manufacturers are finding various ways to eliminate unnecessary packaging. Some remove unnecessary packaging from multi-buy products like canned foods, beverages, and snack packets. Tesco, for example, removed plastic wrap from multi-buy tins (such as soups, beans, tuna, and tomatoes) across all UK stores, which eliminates 67 million pieces of film per year, equivalent to 350 tons[52].

Waitrose's plan to remove plastic film wrapping from five multi-buy tin product lines in 17 stores was put on hold due to COVID-19 but would have eliminated 18 tonnes of plastic film per year.[53] Nestle trialed removing unnecessary tear-offs from items such as water bottles, jars, and the openings of flexible packaging, and SonaeMC did the same with jars.[54]

Some companies are removing unnecessary plastic film from items such as fresh produce, clothing, perfume, cosmetics, and greeting cards (e.g. ASDA's greeting cards). Walmart removed plastic wrap from bananas and peppers in Canadian stores, eliminating approximately 87 tonnes of plastic film per year for peppers, and approximately 6.3 tons for bananas.[55]

Other companies have worked to remove unnecessary secondary packaging. SonaeMC eliminated 725,000 cardboard boxes per year by replacing them with shelf-ready trays – which reduced paper use by 8 tons per year. By eliminating clear secondary lids used on cream and sour cream containers, Tesco saved 34 million items of packaging per year, equivalent to approximately 100 tons.[56]

ASDA eliminated clear plastic PVC covers from bed linen packaging with no notable increase in damage to products. 10.5 million duvet and pillowcase covers, equivalent to 146 tons of plastic, were removed between Feb 2018 and Jan 2020.[57]



1.2 Bans on Specific Single-Use Packaging Products

A ban is a strict intervention into the operations of the free market when the market fails to address environmental or social damages caused by its operations. It generally requires justification of the need to overcome significant industry opposition. To ban specific materials, Environmental Impact Reports (EIRs) are generally required. However, if a policy is material neutral and focuses on eliminating a product type, an EIR might not be necessary. Bans can be a highly efficient method of eliminating unwanted and unnecessary products. Disposable bags, coffee cups, straws, cutlery, chopsticks, stirrers, food containers, beverage containers, wet wipes, household cleaning wipes, and transport packaging are all being considered for potential bans in a variety of jurisdictions across the globe. Any throw-away product that is either unnecessary or could be replaced by a reusable option should be considered for a ban.

◊ Key Policy Provisions

These policies are straightforward. A specific throw-away product is banned by a specific date within a specific industry or government sector. Disposable packaging and product bans in the foodservice sector can apply to such items as throw-away water bottles in government facilities (parks, airports, office buildings). There are examples of plastic water bottle bans proposed for national parks and for government facilities, but to date, none are material neutral and apply to all throw-away water bottles. A key policy provision to include along with bans of throw-away products is a mandate that the retailer offer a reusable version to customers instead.

◊ Policy tools

A specific product with a targeted ban. These bans can be incorporated into more comprehensive foodware reduction laws, including in EPR regulations where producers might be limited as to the types of throw-away packaging that will be allowed to enter the marketplace.

Banning the plastic water bottle

The regrettable outcome of the ban on throw-away plastic water bottles is a transition to one-way aluminum and carton containers whose environmental benefits over throw-away plastic are not clear.[59] Since the benefits of refillable vs. throw-away bottles are demonstrably greater,[60] focusing on eliminating most one-way bottles and providing refillable bottle refill stations would be a better choice for government facilities.

◊ Sample Model Policy

We recommend a ban on non-reusable/non-refillable beverage bottles/cans/cartons and cups in government facilities. This policy has been adopted in Flanders, Belgium, where local authorities are prohibited from serving drinks in disposable cups, cans, and PET bottles in the workplace and at public events. This prohibition similarly applies to non municipal events, such as school parties, local community fairs and festivals, unless the organizers can ensure the separate collection and recycling of at least 90% of those items (95% by 2022).[58]

The San Francisco ban on throw-away plastic water bottles in government facilities was a step in the right direction. The problem is that it applies only to plastic bottles. The results are mixed. On the plus side, more refillable water bottle stations were installed for customers' BYO bottles. But the plastic-only approach resulted in the regrettable transition to either throw-away aluminum bottles or paper cartons, with questionable overall benefits to the environment.

◊ Appropriate legislation body

Local, state, or federal.

◊ Real World Examples

All throw-away containers. Chile enacted a law that prohibits the supply of any throw-away, non-recyclable container by any establishment that sells food. This is perhaps the strongest throw-away product ban as it is not limited to government facilities but applies across the foodservice sector. It also enables citizens to report violations of the law to enforcement authorities and to demand the establishment concerned comply with it.[61]

Cups. Scotland banned throw-away cups in government facilities in 2018.[62] The cities of Dublin, Cork and Meathe County in Ireland have also banned throw-away cups at government facilities.[63] Ireland plans to ban disposable cups for take-out beverages but is starting with prohibiting them in onsite dining and considering a consumer charge, or "latte levy."[64] Charges or fees on disposable cups will likely incentivize a transition to reusable similar to the outcome of grocery bag fees.

Cans. Until 1998, Denmark maintained a ban on throw-away cans for water, beer, and carbonated soft drinks. The refillable packaging systems had to be approved by the Danish government and demonstrate a certain number of refills and a certain amount of uniformity in the refillable bottles.[65] In 2002, Denmark lifted the ban after the European Commission (EC) won a legal battle against the ban, stating it was inconsistent with the EU-Packaging Directive mainly for creating a barrier to free trade. The EC also successfully challenged Portugal's ban on throw-away packaging which was lifted in 1998.[66]

Plastic. In 2018, the EC proposed a directive on single-use plastics that aims to regulate the 10 throw-away plastic products that are most frequently found littering beaches and ocean waters. Since July 3, 2021, all plastic cotton bud sticks, cutlery, plates, straws, beverage stirrers, sticks for balloons, food containers made of expanded polystyrene (EPS), beverage containers made of EPS including their caps and lids, and cups made of EPS including covers and lids are banned on the EU market. While plastic product bans generally result in "regrettable substitutes" of other throw-away packaging materials, an alternative approach could be to ban all throw-away packaging associated with highly littered items.

Hotel Toiletries. In 2018, the County of Santa Cruz adopted an ordinance banning the distribution of throw-away bottles in the county's lodging establishments. A year later, California enacted AB 1162 (Kalra) which applied this policy measure state-wide to hotels of more than 50 rooms starting in 2023 and greater than 50 rooms as of January 2024. Hotels will likely install refill dispensers to provide guests with personal hygiene products. Hotel toiletries and throw-away personal care products in small bottles are being banned with somewhat increasing frequency. A similar law was recently enacted in Bellingham, WA (2021) that goes into effect July 31, 2022, and another state-wide ban, enacted in New York State, goes into effect January 1, 2024.

Disposable straws and utensils are banned for dining-in at fast-food restaurants in France starting in 2023[67] and polystyrene foam boxes for fast-food restaurants.

◊ Private Sector Examples

Marriott, Holiday Inn, Crown Plaza, and more. Numerous large hotel chains have announced plans to eliminate throw-away packaged hotel toiletries over the next few years.[68]

Waitrose. This UK grocery chain is serious about unpackaging. After an "Unpacked" pilot for bulk bins at its Botley Road store for 11 weeks demonstrated a 98% decrease of throw-away packaging across the Unpacked products and that all plastic packaging waste decreased by 83%, they added Unpacked to three more shops.[69] The store's website advises customers to "bring ...your containers for filling up with the products during your Unpacked shop. The containers can be any material, size, shape, or weight, but if you don't have anything on hand at home, you're welcome to buy bags/containers in-store."

Loop. TerraCycle teamed up with big brands to offer name-brand products in refillable containers through online shopping. Their next stop is building in-store kiosks for refillable products in US retail shops including Kroger, Walgreens, and ULTA. In its return-from-home and on-the-go models, the company will professionally clean and reuse the container once the customer is finished with it. As of December 2020, Loop had enlisted more than 100 brands globally and offered more than 400 products.

1.3 Accessories on Request: #SkipTheStuff Legislation

A significant portion of the one trillion disposable foodware items purchased by the U.S. foodservice industry is given to consumers to enable on-the-go convenience. But many customers don't need all the accessory items – utensils, straws, cup lids, stirrers, napkins, condiment packets, and chopsticks – that are automatically included in take-out and delivery orders.

◊ Key policy provisions

The scope of accessories. Some policies have been limited to just a few items, like utensils and straws. Many ban plastic straws and utensils, and some combine an "available only on request" requirement. Jurisdictions in the San Francisco Bay Area, including Berkeley, San Francisco, and the County of San Mateo, have opted to include a wider range of accessory items as available only on request. Upstream's Model Policy uses an even broader scope, suggesting that all types of throw-away items provided with prepared meals to go with plates, cups, and containers should be available only on request, including condiment packets. The most comprehensive approach, as suggested by several cities and the Model ordinance, suggests that the vendor enables customers to select each accessory item they need. In addition, the Model prohibits the bundling of accessories in one package to avoid customers getting more items than they need.

Regulated businesses. Most on-request ordinances apply to the food vendor that prepares the meal ordered for take-out or delivery. The Berkeley Single-Use Foodware and Litter Reduction Ordinance of 2019 was the first to apply accessories on request to online ordering (across all ordering/ point of sale platforms) as well as take-out ordered directly from the food vendor at brick and mortar stores. Several jurisdictions followed the Berkeley model between 2019 and 2021. Both the Upstream Model Policy and the City of Los Angeles Foodware Accessories Upon-Request ordinance refine this approach by requiring that the food vendor or facility add to any third-party ordering application or third party delivery platform an option for the customer to select disposable accessories and condiments.

Opt-in versus Opt-out. The intent of opt-in provisions is to create a default behavior of not providing throw-away accessories. The "opt-out" model where the customer has to select a no-accessory option, or where businesses can offer them and customers have the option to refuse them would substantially undermine the intent of the policy. Science has shown the significant psychological power behind "opt-in" versus "opt-out" – customers will be far less likely to accept wasteful foodware accessories they don't need if they are not given the option.[70] Many customers won't actively take action to stop the vendor from providing accessories. Some jurisdictions, including the County of Los Angeles, wherein the food facility can offer accessories to the customer have gone this route. Opt-in is the best practice for reducing unnecessary accessories.

Self-serve stations. Many laws allow vendors to make accessories available at self-serve stations or with "single-item" bulk dispensers (e.g. bulk dispensers that only dispense one item at a time). While generally customers will only take what they need with dispensers and self-serve, keeping accessories behind the counter is the surest way to reduce unnecessary waste. A best practice is not to include this exception. However, California's AB 1276 provides that accessories can be provided if they are unwrapped and dispensed one at a time, and service from a refillable dispenser is encouraged for condiments.

Exceptions for Drive-through and Airports. Some policies provide an exception for drive-through service and airports. California's AB 1276 (Carillo) allows servers to offer a customer accessories or condiments (as opposed to only providing them on request) at drive-throughs and airports. The rationale for this exception is that once they drive or fly away, customers that forgot to request an accessory or condiment needed to consume the prepared food and beverages are unable to go back and get what they need. The City of Los Angeles Foodware Accessories Upon-Request ordinance allows servers to offer disposable foodware accessories to customers getting delivery or at a drive-through.

No bundling. The Upstream Model Policy suggests a prohibition on bundling accessories into a package so that the customer who asks for a fork, for example, doesn't get a whole packet of unwanted accessories because the

Unnecessary Foodware Accessories

Disposable utensils. More than 36 billion are used every year in the United States. Put end to end, they would wrap around the Earth 139 times.[73]

Straws and stirrers were the third most common beach litter items during the 2019 International Coastal Cleanup.[74] Americans use as much as 142 billion straws each year.[75]

Napkins come from trees and require significant water to produce. Cutting trees propels the climate crisis and destroys habitat, amid the planet's 6 mass extinction of species.

Chopsticks made in China result in cutting down 4 million trees per year.




fork was bundled into it. Both California's AB 1276 (Carillo) and the City of Los Angeles Foodware Accessories Upon-Request ordinance prohibit bundling.

◊ Examples

To date, over thirty local jurisdictions have enacted policies that require food businesses to ask first before providing customers with foodware accessories. Most are in California. Three states have enacted accessories on request for all material types:

California (AB 1276-Carillo). Passed in 2021, AB 1276 only allows a food facility to provide disposable foodware accessories or standard condiments when a customer specifically requests them, except at airports or drive-throughs where they can be offered.

Washington State (SB 5022). Passed in 2021, SB 5022 specifies that "a foodservice business may provide the following throw-away foodservice products only after affirming that the customer wants the item or items: (i) Utensils; (ii) Straws; (iii) Condiment packaging; and (iv) Beverage cold cup lids" and prohibits bundling of utensils. Foodservice businesses include home delivery, vending carts, and institutional cafeterias.[71]

Washington, D.C. (B23-0506). The Zero Waste Omnibus Amendment Act of 2019 requires, among other things, that foodservice entities only provide accessory disposable foodservice ware upon request by the customer or at a self-service station.[72]

◊ Sample Model Policy

Model Policy for Reducing Single-Use Accessories in Take-Out and Delivery

◊ Appropriate legislative body

Local, state, or federal

◊ Resources Available

Policy tracker

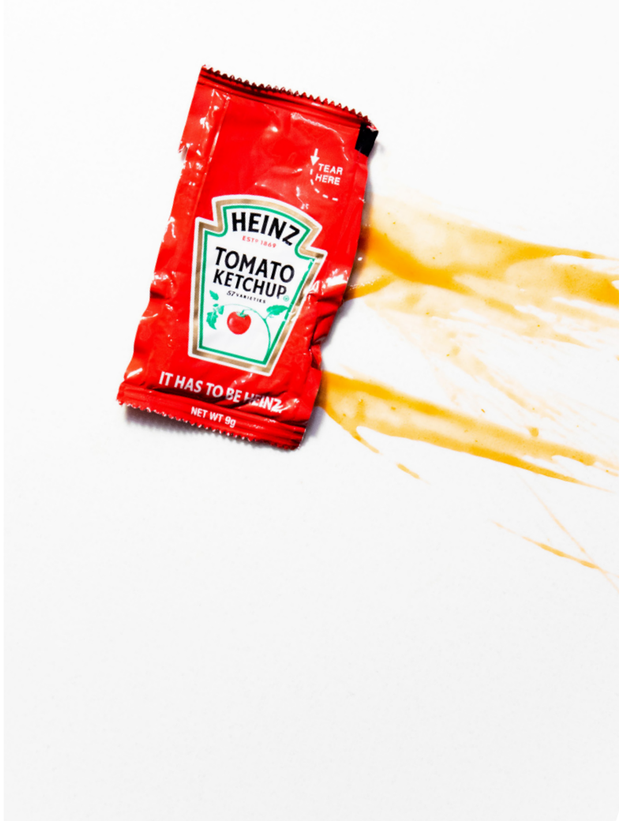
Join Upstream's Skip the Stuff campaign to access:

Fact Sheets for Organizers and Legislators

Sample organizing strategy

Sample press releases

Sample letters to the editor



Strategy #2: Transition the Rest to Reusable and Refillable

After reducing as much unnecessary packaging as possible, businesses should transition the rest of the packaging to reusable and refillable formats. This section provides five policy measures to implement this transition.

2.1 Sector-wide targets for reusable packaging

Reuse is one way to reduce overall packaging waste generation. Sector-specific targets for reusable packaging can be part of the overall targets for reduction discussed in Section 1, or targets for reuse can be stand-alone.

◊ Key Policy Provisions

Our current recommendations are targets for reducing throw-away foodservice packaging, by eliminating packaging (reduction) or by transitioning to refillable/reusable formats of:

- 10% within 2 years of policy enactment,
- 20% within 4 years
- 30% within 6 years
- 40% within 8 years
- 50% within 10 years

In a national strategy, France proposes a 20% reduction in throw-away plastic packaging, 50% of that reduction is to be achieved by a transition to reusables.[76] This is an interesting approach for an overall packaging goal, but applied to specific producers, for many it would be hard to achieve. Rather, we favor an individual producer responsibility approach within each sector wherein each producer must meet reduction requirements that can be achieved either through elimination of avoidable packaging or by transitioning to reuse.

◊ Policy Tools

Reduction targets can be incorporated into either:

Regulatory targets based on rates and dates – a stand-alone regulation

EPR packaging legislation

DRS legislation

◊ Appropriate legislative body

Regulatory Targets/Rates and Dates: Local, state, and federal

EPR: State or federal

DRS: Local, state, or federal

◊ Policy Examples

With its Single-Use Plastic Directive (2019)[77] and comprehensive Circular Economy Action Plan (2021)[78], the European Union plans to reduce overpackaging and promote reusability and recyclability. The Commission has signaled its intent to set ambitious and legally binding targets for certain sectors to reduce throw-away and drive reuse - eliminating residual waste by 50%. Europe has also targeted making all packaging reusable or recyclable by 2030 in the 2020 Circular Economy Action Plan.[79]

In preparing to comply with the EC laws on packaging, plastic, and circular economy, Romania is the first country in Europe to adopt a mandatory target for reusable packaging, requiring that as of January 1, 2020, market operators who place packaged products into the Romanian market must sell a minimum of five percent of their goods in reusable packaging, with an annual increase of five percent until 2025, thereby reaching 30% sales in reusable. Retailers must provide a reusable option to consumers as well as the ability to return the package to point of sale.[80] A regional law adopted in Navarra, Spain in 2018 requires businesses in the hotel, retail, and catering sector (HORECA) to serve 80% of beer, 70% of soft drinks and 40% of water in reusable containers by 2028 and 15% of beverage containers sold in shops must be reusable also by 2028. The Balearic Islands of Spain adopted similar requirements with a deadline of 2030.[81]

The Rethink Plastic Alliance recommends targets for reuse to be achieved by 2030 in 3 business sectors:

Foodservice:

- 100% reusable target for eat-in food and beverages
- 75% reusable target for takeaway and delivery food and beverage

Transport packaging:

- 50% reusable target for clothing and accessories shipped within the EU
- 50% reusable target for all other goods shipped within the EU

Grocery store products:

- 75% reusable target for household cleaning products
- 75% reusable beverages (soft drinks & alcoholic)
- 50% reusable personal care products (shampoo, soaps, etc.)[82]

In a study[83] of the projected annual results of various rates of reuse in these sectors, the following business cost savings and environmental benefits are shown for a 20% reuse rate by 2027 and a 50% reuse rate by 2030:

	Savings in 2027, 20% reuse rate	**Savings in 2030, 50% reuse rate**
Climate	~1.3M tons CO_2	3.7M tons CO_2
equivalent to...	CO_2 absorbed by 59 million trees	CO_2 absorbed by 170 million trees
Water	~3.5 billion cubic meters	10 billion cubic meters
equivalent to...	1.4 million olympic pools	4 million olympic pools
Material Use	10M tons	~28M tons
equivalent to...	1.26 million truckloads	3.5 million truckloads

Binding reuse targets create the conditions in which businesses can safely invest in the associated technology and infrastructure for reuse to scale.

◊ Private Sector Examples

New and innovative reusable cup and container systems are launching all over the world. Companies like Dishcraft in the U.S. to Uzaje in France offer full-service reuse with centralized dishwashing systems in the catering and take-out food service spaces. For take-out and delivery, Dispatch Goods, MPorte, ForeverWare, and Reusables.com offer restaurants stainless steel to-go food container options, and other companies offer to-go reusable plastic food containers such as GoBox and DeliverZero. There are community based NGOs, like Don't Waste Durham that have launched reuse systems for local restaurants and even local jurisdiction-operated programs like Keep Truckee Green and Hannocino and Freiburg Cup in Germany that operate reusable take-out cup and container programs. Other reusable cups systems include Usefull and Savrcup. And many companies are working to transform the event space and workspace, including r.Cup, Globelet, and ReDish.

◊ Resources Available

A more detailed list of examples for various market sectors, from grocery to E-commerce to bulk and refill shopping systems, is available on Upstream's Reuse Business Directory.

Fact Sheet: Reuse Wins

2.2 Only reusable for onsite dining

First enacted in the Berkeley Single Use Foodware and Litter Reduction Ordinance, California in January 2019, this provision was set to be implemented in July 2020 but was put on hold due to COVID-19. Since then, the California cities of Arcata, Culver City, Fairfax, Palm Springs, and San Anselmo have adopted similar ordinances. Bellingham, Washington also enacted a similar policy. Countries and cities across the globe are adding reusables for onsite dining to their plastic pollution policies, including Chile, Navarra and the Balearic Islands in Spain, Seoul, and France (for fast food).

◊ Key Policy Provisions

Specific foodware items regulated. Generally, the reusable requirement applies to utensils, plates, bowls, and cups. Exemptions are included for food wraps, tray liners, and some exclude condiment cups and accessories. Some ordinances (Bellingham, Palm Springs) also require that condiments must be provided in reusable containers or bulk dispensers.

Waivers. Restaurants may apply for a waiver where the ability to wash dishes is hampered by insurmountable space constraints, undue financial hardship and/or other insurmountable circumstances. In a few policies (Berkeley, San Anselmo, Fairfax) waivers have been limited to two or three years.

Business licenses and zoning permits. The City of Arcata included a provision to ensure that future businesses would always be able to comply. It requires that when food vendors apply for or renew zoning permits and business licenses, they must demonstrate adequate dishwashing capacity to comply with the reusables for onsite dining requirements.

Option to limit to new businesses. The Model Policy provides an option to limit the reusables onsite requirement only to new businesses. This option was created for legislators who are concerned about regulating existing food businesses struggling to recover from COVID-19 shut-downs.

Exemptions. Disposable packaging provided to customers for leftover prepared food is generally allowed.

◊ Policy Tools

This type of policy is a mandate for reuse. It can be incorporated into a stand-alone ordinance or legislation or combined with other provisions regarding take-out food service, such as accessories on request and charges for disposable to-go cups and containers.

◊ Appropriate legislation body

Local, state, or federal

◊ Examples

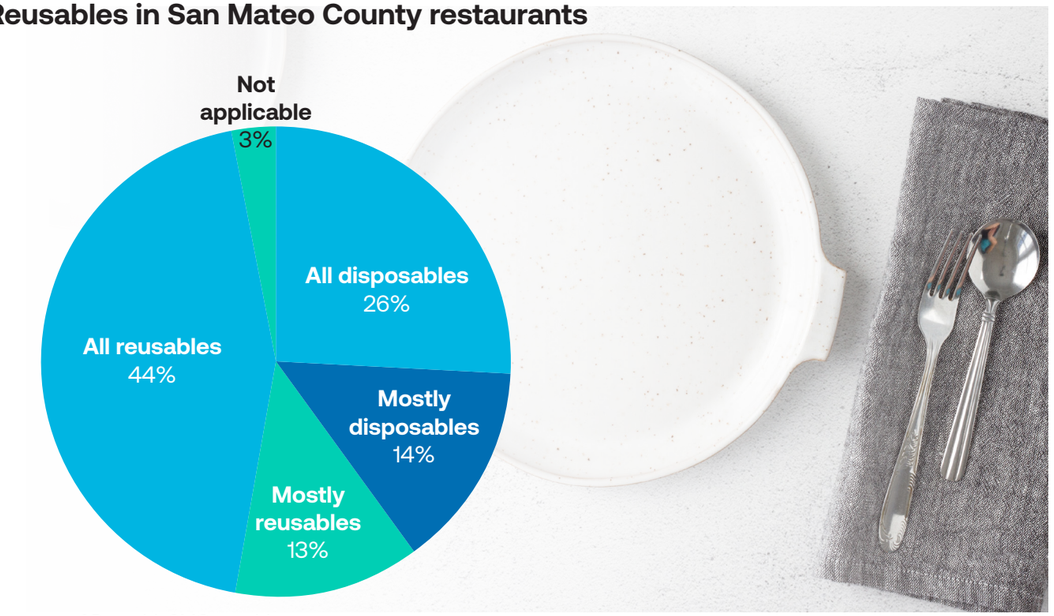
Many restaurants and cafes operate as reuse-only. Typically, reuse-only is considered the norm at fine dining establishments. Fast-casual restaurants more often operate with a mix of reusable and disposable, while fast food or quick service is normally based on an all-disposable model. A survey of San Mateo County restaurants conducted in 2020 revealed that the majority of foodservice operators (44%) use all reusables, while 26% use all disposables, 13.6% were mostly disposables and some reusables, and 13% were mostly reusables and some disposables.[84]

Foreign country examples of this policy include Quezon City in the Philippines, which banned the use of all throw-away foodservice items for dine-in customer service at restaurants and hotels. Seoul, South Korea also has enacted a policy stating that fast-food chains, cafes, and restaurants can't use throw-away cups and plates for onsite dining.[85] Similarly, Chile prohibits disposable foodware for onsite dining.[86] France's Law on the Circular Economy bans throw-away plastics but also fast-food restaurants will no longer be allowed to use throw-away foodware as of 2023. All throw-away foodware used for daily home meal deliveries and onsite consumption in homes, restaurants, and cafes will have to be reusable by 2022 and 2023 respectively.[87] In 2019, Taiwan banned throw-away foodware for dine-in customers at restaurants, in department stores, malls, and supermarkets.[88]

◊ Resources Available

- Model Policy
- Upstream's Reuse Policy Tracker
- ReThink Disposable Case studies
- Fact Sheet: Reuse Wins

Reusables in San Mateo County restaurants



Courtesy of ReusableSMC: reuablesanmateocounty.org

2.3 Consumer charges for throw-away cups and containers, plus mandatory reuse

Taxes and fees on throw-away packaging help to internalize the external costs of waste within the cost of the product. An important aspect of such taxes and fees is ensuring that they are visible to the consumer, rather than internalized in the cost of the product. Visible costs can influence both the consumer and the retailer's decision as to which packaging format to choose and charges for throw-away can help to level the economics with the cost of reusable packaging.

Taxation should be simple so as not to cause too much administrative work for businesses and regulators. Tax rates should be calculated based on packaging items, or units, or based on packaging volume – not based on packaging weight – to avoid encouraging plastic packaging to reduce costs.

◊ The First Mandatory Disposable Cup Charge.

The City of Berkeley's January 2019 Single-Use Foodware and Litter Reduction ordinance was the first policy in the world to enact a city-wide mandatory consumer charge for take-out throw-away cups. Implementation of the 25 cent charge was delayed due to COVID-19. It was intended to provide the financial motivation for customers either to bring their own reusable cup or sit down onsite to drink a beverage to avoid the disposable charge. Since Berkeley's action, several California cities (Arcata, Berkeley, Fairfax, San Anselmo, City of Santa Cruz, Santa Cruz County, Watsonville, Santa Rosa), as well as Vancouver, B.C. now have charges on cups and a few also charge for containers and utensils.

◊ Local Businesses may support mandatory charges when the playing field is level.

In a survey of over 90 San Francisco café owners in 2016, 71% said that they would support a mandatory disposable cup charge if they got to keep the money, as long as the charge applied to all cafes in the city. Cafe owner interviews revealed that they would not support the charge if it didn't apply to all cafes within the jurisdiction as they feared losing customers to cafes that didn't charge customers.[89] In a similar survey of 59 Berkeley food businesses in 2017-2018, 58% of respondents indicated support for a customer charge for cups, and 67% would support a charge for disposable food containers if they got to keep the money and if the charge applied to all businesses in the jurisdiction.[90]

◊ Key Policy Provisions

Charging for Disposables Incentivizes Consumers to Opt for Reusables. Plastic bag legislation that mandated consumer charges for throw-away plastic or paper grocery bags (with a plastic ban) consistently demonstrates success in reducing plastic bag consumption and increasing the transition to reusable bags. For example, when Ireland instituted a "Plas-Tax" in 2002 of 0.15 EU, plastic grocery bag consumption declined by 90% and there is 40 times less litter

from plastic bags in Ireland today as compared to the year 2000.[91] Taiwan's charge for plastic bags in 2003 resulted in a 68% reduction in use. The District of Columbia's 2010 law that imposed a $0.05 charge for throw-away plastic grocery bags resulted in a 75% decrease in consumption. In 2015, Great Britain implemented a 5 pence charge for plastic bags that resulted in an 80% decrease in their use.

Social behavior change scientific studies of the impacts of throw-away bag taxes or charges of 5 cents for bags in Washington D.C. and Montgomery County, Maryland, had significant impact on customers switching to reusables, despite the low cost (only 5 cents), and demonstrated that the charges are much more effective than higher-level discounts of 10 cents.[92]

Voluntary measures are less effective. Starbucks committed to sell 25% of its beverages in reusable cups by 2015, but failed to take serious steps to achieve its goal and is currently achieving a 1.4% rate of reusables.[93] In 2017, the United Kingdom considered, but failed to enact, a "latte levy" after voluntary efforts by Pret a Manger and Costa takeout food chains who offered a five pence discount failed.[94]

Charges are more effective than discounts. In 2011, Starbucks initiated a 25 pence discount and a 1 pound reusable cup. They achieved less than 2% reusable cups sales. In 2015, they increased the discount to 50 pence yet reusable sales remained at 1% -2%.[95] In a 2018 trial, Starbucks applied a 5 pence disposable coffee cup charge across 35 stores in London and found that reusable cup usage doubled from 2.2% to 5.8%. The results were similar to their efforts in the U.S.

Twenty-Five Cents is the Sweet Spot. Of 461 San Francisco café customers surveyed, 11% reported bringing their own reusable cups regularly. Seventy-seven percent supported the idea of a mandatory charge and the majority reported that a 25 cent charge would be the lowest charge that would be most likely to get them to bring their own (BYO) reusable cup.[96] A Cardiff University study of disposable cups charges also reported 25 pence as the sweet spot for encouraging BYO reusable cups.[97]

Ensure equity. Low-income individuals should be exempt from charges for disposable and reusable products. Existing ordinances that make such accommodations exempt those receiving food assistance through WIC or EBT from disposable cup or container charges. An additional exemption can be added for MediCal recipients. However, future policies would benefit from a deeper equity and inclusion effort and more input from diverse constituencies.

Add a Mandatory Returnable Reuse Requirement. There are significant concerns that the charge can create a "perverse incentive" for business operators to promote the disposable cup since they will make more money on the disposable option. Therefore, we recommend adding a mandate that the business operator that sells food and beverage for take-out not only charge 25 cents per cup and per container, but also that they must provide a returnable reusable option at a lower cost.

◊ Policy tools

Consumer charges, taxes, and fees, plus mandates for reuse.

◊ Appropriate legislation body

Local, state, or federal

◊ Private Sector Examples

Boston Tea Party. Refuses to provide customers with a disposable coffee cup at their 25 London Cafes. Customers can BYO, enjoy their coffee onsite, or borrow a returnable cup.

Costa Coffee. A UK-based chain, offers a 25 pence discount.

Waitrose. As of 2018, this London-based supermarket chain no longer provides disposable coffee cups to customers buying hot drinks to go.

◊ Policy Examples Outside the U.S.

In response to the growing waste crisis, Ireland is considering banning throw-away coffee cups, with 50% of the population surveyed in support,[98] and a levy on throw-away cups has already been enacted.

Similarly, a latte levy was proposed in Wales in 2018.

Taiwan will be imposing charges for all straws, plastic shopping bags, disposable utensils, and beverage cups by 2025 and will impose a complete ban on throw-away plastic items, including straws by cups, and shopping bags by 2030.[99]

The German VerpackG2 has been in effect since July 3, 2021, and requires that 70% of beverages be sold in refillable packaging. It also requires

that distributors of throw-away plastic food packaging and throw-away beverage cups must, as of January 1, 2023, offer the same goods that are offered in one-way packaging also in reusable packaging and at an equal or lower cost with the non-reusable packaging. And the retailer offering the reusable packaging to customers must notify customers at the point of sale, utilizing clearly visible information, signs, or boards, the possibility of receiving the goods in reusable packaging. Furthermore, the retailer must take back the reusable packaging.[100]

Chile requires that marketers of beverages in disposable plastic bottles also offer them in returnable container format, and to provide a return mechanism for consumers. This will also apply to electronic commerce, that is, purchases made online. In this way, applications such as Cornershop or delivery must also offer the option of returnable containers among their products. Those who fail to comply with these obligations – whether they are large marketers or electronic commerce – can face fines of up to $1 million (20 UTM) for each day that this type of packaging is not available.[101]

◊ Resources Available

- Model Policy
- Cup and Container Charge Fact Sheet
- Upstream's Reuse Policy Tracker

Germany is serious about reuse and refill

The German VerpackG2 has been in effect since July 3, 2021, and requires that 70% of beverages be sold in refillable packaging. It also requires that distributors of throw-away plastic food packaging and throw-away beverage cups must, as of January 1, 2023, offer the same goods that are offered in one-way packaging also in reusable packaging and at an equal or lower cost with the non-reusable packaging. And the retailer offering the reusable packaging to customers must notify customers at the point of sale, utilizing clearly visible information, signs, or boards, the possibility of receiving the goods in reusable packaging. Furthermore, the retailer must take back the reusable packaging.

2.4 Reuse at Government Workplaces and Events

Requiring reusables at government-sponsored events or facilities is the "low-hanging fruit" of reuse policies. There are fewer opponents to policies that impact government agencies or just one business group, such as the events sector. The San Francisco foodware ordinance requires event producers who provide prepared beverages to more than 100 attendees on City property to promote or provide reusable beverage containers to at least 10% of attendees. Because some festivals and events are transitioning to 100% reusable, including Outside Lands in San Francisco, 10% is a low bar. However, a powerful outcome of the SF event reusables policy is that one of the largest event producers is switching their measurement method from counting "single-use cups used" to a metric at the cash register. They are changing their software to account for beverages sold in reusable cups. A phased approach (25% in 2 years, 50% in 4 years, etc.) leading to a 100% reuse mandate at events is likely achievable.

In 2019, the Belgian region of Flanders enacted a policy that prohibits municipal government facilities (workplaces and publicly funded events) from serving drinks in disposable cups, cans, and PET bottles.[102]

◊ Appropriate legislation body

Local, state, or federal government

Reuse Events Companies

r.Cup. A reusable cup system backed by Smart Cup r.Turn technology to track your positive impact.

TURN. A digital platform that eliminates single-use plastic with a capture and reuse system. Their dishwashers can wash cups 700% faster than traditional dishwashers. Their dishwashing is built into truck containers so they can wash in any location at any time, and they also install reverse vending machines for easy collection.

SudBusters. A California-based reusables service for events and business needs. They deliver sanitized reusables to any location and pick them up for cleaning. "No event is too large or too small" for Sudbusters.

TURN

r.Cup

SUDBUSTERS

2.5 Reuse in Government Procurement

Leveraging the purchasing power of government can have an enormous impact on the development and support of environmentally beneficial products, services, and systems. Eliminating throw-away products and prioritizing reduce, reuse, and repair should be at the core of government procurement policies, much like the focus on purchasing recycled content materials.[103]

◊ Key Policy Provisions

Specify reusable, durable, and reduced packaging.

- Purchase products that are durable, long-lasting, reusable, or refillable, and avoid purchasing one-time use or disposable products.
- Request vendors to eliminate packaging or use the minimum amount necessary for product protection.
- Specify a preference for packaging that is reusable, recyclable or compostable, when suitable uses and programs exist.
- Require the use of reusable foodware for government meetings and events and those that receive government funding.
- Require water refill stations for government buildings; and
- Require new office construction to equip lunch rooms and office break rooms with high-efficiency dishwashers and reusable foodware.

Prohibit purchasing of specific throw-away items such as:

- Disposable beverage containers.
- Disposable foodware for government offices that have sinks and dishwashing facilities.

◊ Policy Tools

Unlike the other policies in this playbook, this policy represents the government regulating itself. It's a mandate of sorts, but one with administrative consequences rather than legal ones.

◊ Appropriate legislative body

Local, state, or federal government.

◊ Policy Examples

California has an EPP program which refers to the Alameda County STOP WASTE Environmentally Preferable Purchasing Model Policy. That policy contains several provisions related to choosing durable, long-lasting products, and specifying that vendors minimize packaging.

◊ Resources Available

Model Government Purchasing Policy

Strategy #3: Hold Producers Accountable

Reduce and Reuse built into Extended Producer Responsibility

Extended Producer Responsibility (EPR) for packaging was enacted in 1991 in Germany. Its original intent was to reduce packaging waste by making producers responsible – either financially or logistically – for taking back and managing their products once they become waste. This model was subsequently adopted by the EU and later many other countries. Despite many revisions at the EU level, the packaging directive never had the big impacts on waste prevention that were envisioned. Data collected for the European Commission show packaging waste generation generally growing over time. The main reason for this failure to prevent packaging waste generation is that the targets and performance metrics set in EPR packaging laws generally focus on recycling and recovery.[104]

It is no wonder that the packaging reduction has not been achieved in any significant way by any packaging EPR program worldwide. None, to date, has ever specifically mandated that producers meet any packaging waste reduction targets.

EPR laws can be structured to hold producers responsible for a large range of impacts and actions related to their products across their life-cycle. They can require better design at the outset, less packaging, lower impact during production, recovery, and recycling at end of life, and even cleanup of products and packaging that becomes litter. For example, two U.S. state-level bills introduced in 2013, AB 521 in California and Rhode Island's HB 5264/Senate Bill S406, were the first legislative measures to focus on marine impact reduction as an EPR program goal.[105] AB 521 would have required producers of the top 10 most littered products, based on California Coastal Cleanup data, to be financially responsible for their cleanup.

The highest priority of EPR for packaging laws should be to prevent the generation of packaging waste, as originally envisioned in the EU packaging directive. To build packaging prevention (i.e. source reduction) into state EPR legislation, the following provisions are necessary.

◊ Key Provisions

Mandatory targets producers must meet for packaging reduction. We recommend a phased set of targets to reach nearly complete elimination of throw-away packaging in each business sector (foodservice, transport/e-commerce, consumer grocery/cleaning/ and personal care products). Packaging waste generation should be minimized by reduction measures that eliminate unnecessary packaging and also by converting packaging to reusables achieving the following levels of of both packaging reduction:

- 10% within 2 years of policy enactment
- 20% within 4 years
- 30% within 6 years
- 40% within 8 years
- 50% within 10 years

A robust, unit-based, system of measurement. Each business sector conducts a baseline measurement of the total number of packaging items put into the marketplace, identifying the number of items/units that are reusable/refillable. Each business will report the average number of cycles for each of those reusable/refillable items/units. Each year producers will report on the same – the total quantity of packaging items put into the marketplace, identifying the percent that is reusable/refillable.

Fully binding and independent auditing. Numerous failures of California's carpet and mattress stewardship programs over the last few years, resulting from a lack of transparency in their operations and lack of oversight capability of regulators, provide clear examples of the need for outside, independent systems of auditing to ensure the targets are being met. Industry self-monitoring should be avoided. Those tasked with auditing must have sufficient resources and should not have any inherent conflicts of interest.

Eco Modulation of fees. Fees paid by producers into the product stewardship or producer responsibility organization (PRO) system must be unit-based rather than simply weight-based to avoid light-weighting of packaging – as seen in places like Sweden where weight-based fees resulted in a 50% light-weighting of packaging to meet the reduction requirement, resulting in hard to recycle plastic laminates.[106] Fees should be structured such that less-packaged products and those delivered in refillable or reusable formats cost producers much less compared to disposable products. Our model policy suggests reusable packaging have no fees attached.

Ensure high return rates. A minimum return rate of 80% should be required for each producer-run reuse system. Producers can use deposits or consumer charges for failure to return. Most systems that have deposits or charges for unreturned packaging achieve over 90% return rates.[107]

Equitable Access. Reuse systems should be available in all communities, particularly low-income communities that are most impacted by street litter and pollution. Producers should be required to provide reuse return infrastructure in convenient locales within all communities and make it convenient for those who don't have access to smartphones and other digital methods of participation.

◊ Appropriate Legislative Body

State or federal government

◊ Examples

To date, there are no examples of source reduction incorporated into an existing EPR for packaging law as a required activity. This was proposed in 2021 introduced in amendments to the Break Free From Plastic Pollution Act (S. 984). Section 12105(g)(2) (B) requires that 15% of packaging is eliminated or offered in reusable formats.

However, a recently enacted Oregon SB 582 (Dembrow) packaging EPR law includes funding for waste prevention and reuse in Section 32. All PROs are required to pay a fee that the state will use to "establish a program to reduce the environmental impacts of covered products through means other than waste recovery, including waste prevention and reuse." Funding starts in 2027. By the end of the decade, the Department of Environmental Quality is forecasting that this feature of the bill will generate approximately $8 million annually in an average year.[108]

Furthermore, the law requires "eco-modulation" of the fees that PROs charge to their members. The eco-modulation in Section 11(4) will be based on several factors, one of which is "the reduction in life-cycle impacts, as demonstrated by an evaluation performed in accordance with Section 33 . . ." Producers will receive a financial incentive if they evaluate impacts based on Life-cycle Assessments (LCAs), which will help to shine some greater light on the impacts of disposable items. LCAs will have to comply with rules that will be set by Oregon's Environmental Quality Commission that will result in greater consistency and comparability in the disclosure of impacts. While evaluation and disclosure of impacts will be voluntary for most producers, Section 33(2) goes one step further and requires the very largest producers (e.g., Amazon) to disclose life-cycle impacts for a small percentage of their covered products (one percent every two years).

◊ Additional Resources

Model EPR policy (coming soon)

Strategy #4: Use a Justice and Equity Lens in Developing Policy

Historically, waste and waste prevention policies in California have not been developed with deep thinking about equity and inclusion in the development of policy. These principles are offered to help policy-makers and advocates find more equitable ways to develop policy in the future.

Incorporating Diverse Voices

Indigenous communities, communities of color, and lower-income communities suffer the most from the impacts of climate change/pollution and have traditionally been excluded from the policy development process. Policymakers and advocates should prioritize creating reuse policies that are specifically designed to listen and incorporate the diverse voices from frontline/fenceline communities throughout policy development, formation, decision-making, outreach, and implementation phases.

Develop Meaningful Relationships

Policymakers and advocates should develop meaningful relationships with individuals and businesses within the communities they serve, showing respect for the history, culture, traditions, solutions, and capacity of these communities. Rather than use a transactional approach, leadership should commit resources to allow the time and space necessary for the development of meaningful relationships, and prioritize inviting these groups to the table as equal partners to help shape policy. In addition, policymakers and advocates should support existing community campaigns and priorities, and help make the connection with reuse.

Develop Inclusive Policy Strategies

Historically, vulnerable communities have not been included in the development of policies that directly impact them. Policymakers should employ policy strategies that are inclusive and require diverse community participation throughout the entire policy-making process. In addition, community-based organizations and constituencies engaged in policy change should be acknowledged and adequately credited for all positive outcomes they helped to achieve.

Work to Bring Resources to Enable Community Partners to Participate

To achieve diverse community participation, policymakers and advocates should continue the practice of introducing community partners to funders and soliciting meaningful financial support for those that need it to engage. In addition to prioritizing financial support, policymakers and advocates should work to bring additional logistical resources to enable participation and to build capacity.

Create Policies rooted in Anti-Racist Concepts

Anti-racism is defined as, “a belief or practice that recognizes pervasive racism in society, and actively combats racial prejudice and discrimination to promote racial justice and equality.” Policymakers and advocates should create and support reuse policies that are rooted in the concept of anti-racism. Specifically, policymakers and advocates must recognize how systemic racism is embedded in our culture and communities and will prioritize creating and supporting reuse policies that work to actively dismantle the existing white supremacy culture.

Create Reuse Policies that Support a ‘Just Transition’

Policymakers and advocates should create and support reuse policies that are rooted in the concept of a ‘Just Transition’. Such policies build upon an economic and political power shift from an extractive economy to a regenerative economy, which approaches production and consumption cycles holistically and waste-free. This shift will be just and equitable, addressing past harms and creating new opportunities and power shifts for the future.

Prioritize Bottom-Up Organizing

Policymakers and advocates should recognize the importance and necessity of grassroots and local organizing and the impact it has on driving change and awareness. Policymakers and advocates should prioritize building and strengthening relationships with local organizers to support them and their work, and ensure local organizers are included within the development of reuse policies.

◊ Examples

Some of the accessories on request laws have taken into account special needs of persons with disabilities, allowing for plastic straws when needed. Cup charge ordinances in California attempt to lighten the burden on low-income individuals by providing exemptions for those receiving food assistance. But these policy accomodations came about once the policy was already developed. A more genuine equity approach would reflect early stage input of diverse stakeholders and constituencies before a policy is finalized.

Photo: Global Alliance for Incinerator Alternatives

Strategy #5: Provide Economic Support and Incentives for Businesses

Tax incentives

Examples of reuse-specific tax incentives are hard to find. Reuse is often grouped with recycling tax incentives that focus on the purchase of equipment and machinery needed for recycling. For example, the federal government only offers businesses a tax credit for the depreciation of recycling machinery or equipment. Additionally, some states offer property, sales, and income tax incentives for businesses that purchase recycling equipment.

With the reuse economy emerging, the reuse movement has an opportunity to advocate for reuse-specific tax incentives at all levels of government. Additionally, this provides the movement a chance to ensure the tax incentives being advocated for include an equity and justice lens.

Currently, there are four federal tax incentives that reuse businesses can capitalize on that also incorporate equity and justice. These incentives are not specific to the reuse movement, but can help fill the void that exists throughout all levels of government in addressing the emerging reuse economy. They also help to further Strategy #4 – justice and equity – and prioritize spurring innovation in underserved areas and by business entrepreneurs who often have a hard time raising capital. These programs include the:

- **New-markets tax credit:** Investors can claim this credit for making indirect investments in minority-owned businesses. Any taxpayer can receive a credit against federal income taxes for making an investment in designated community development entities (CDEs).
- **Indian employment tax credit:** Businesses that hire people who live on or near a reservation are eligible for this credit.
- **Accelerated depreciation:** Businesses can depreciate their capital expenses more rapidly than other properties, which could reduce a business's tax liability earlier and in-turn improve the present value of its after-tax income. This is only for businesses considered to be on Indian reservation property.
- **Empowerment Zones:** Areas designated by the Department of Housing and Urban Development (HUD) for urban areas and by the Department of Agriculture for rural areas. Businesses operating in this zone qualify for the following special tax breaks: (1) Empowerment-zone employment credit, earning $3,000 per eligible employee hired in these locations; (2) Special capital: gain exclusion for small-business stock in corporations within the zone that is held for more than five years; (3) Additional first-year expensive write-off of up to $35,000 for purchases of equipment and machinery.

Grants

At all levels of government, there are grants for marine debris prevention, sustainable materials management, zero waste and recycling, stormwater pollution, and litter reduction. However, an increasing number of government grants are being made available specifically to support reuse. Upstream maintains a living library of grants for reuse. California has an increasing number of reuse grants.

At the state level, CalRecycle launched a reuse grant program in 2019/2020 as a pilot program to reduce greenhouse gas emissions by expanding waste diversion in California through reuse grants in this arena.

At the local level, the City and County of San Francisco has provided funding in this space, through a bi-annual zero waste grant, for many years. Stop Waste in Alameda County has consistently provided grants to support reuse and repair in businesses and schools and reuse innovation in transport packaging. San Mateo County has offered a 4Rs grant annually since 2018/2019. Meanwhile, Santa Clara County has funded reuse programs through its clean water protection/pollution prevention grant. Marin County funds zero waste programs of member agencies. The Altamont Advisory Board's annual grant program has also funded several waste reduction programs.

Cities and states outside of California are also supporting reuse and waste prevention. Examples can be found in Connecticut, Massachusetts (with a Sustainable Materials grant and the Recycling Dividends Fund), Minnesota (Hennepin County and Dakota County), Oregon, Seattle (which has a waste prevention fund and an Innovation Fund), and Victoria with several funds including the Innovation Fund. Washington D.C.'s Department of Energy and Environment is establishing a new fund for reuse.

Technical assistance, education, and outreach

Several local agencies in California – including Alameda, Berkeley, Cupertino, Oakland, Palo Alto, San Mateo County Stop Waste, San Anselmo, San Francisco, San Jose, Santa Clara County, and Sunnyvale – have provided direct technical assistance to food businesses to transition to reusable by partnering with Clean Water Fund's ReThink Disposable. To date, the program has worked with 251 business participants, reduced disposable foodware by 21 million items per year, prevented 262,237 pounds of waste, and saved businesses $653,693 per year. Launched in 2012, this award-winning program has a superb track record of helping businesses transition onsite dining foodware to reusable. In addition, the County of San Mateo, through its Foodware Aware program, conducts direct education and outreach to local food businesses.

Strategy #6: Add Some Precautions for Disposable Foodware

6.1 Only specify recyclable or compostable that works locally

There is a significant gap between what kinds of packaging are technically recyclable or compostable and what gets recycled or composted in the local waste management program. Most foodware isn't recycled because it's too dirty and contaminated with food to be recycled.

Compostable packaging often doesn't end up in compost facilities because it isn't accepted by commercial composters or because the infrastructure doesn't exist. Some don't accept any type of food packaging because it contaminates and thereby lowers the value of their compost. Even when it does get composted, the environmental impacts from producing, using, and disposing of compostable products typically outweigh the advantages.

The best approach is for local jurisdictions to require that food businesses only use the types of foodware that can be either recycled or composted in the local waste management program.

6.2 Ban priority classes of chemicals

There is significant and increasing consensus within the community of environmental and public health experts that the U.S. and most other countries lack truly effective regulations to protect public health from toxic chemicals that migrate out of food packaging into the food and beverages that we consume.[109] Many packaging products contain "chemicals of concern" that are linked to cancer, reproductive problems, cardiovascular disease, obesity and other health effects.[110] And there is such a lack of information about the chemicals that are added both intentionally and unintentionally during the manufacturing process that there may be many more harmful chemicals in food packaging than we are aware of.

Chemicals found in food packaging and foodware have been linked to many kinds of health effects including cancer, infertility and other reproductive harm, developmental harm, and hormone disruption.[111] Some of these compounds are also highly persistent in the environment and can accumulate in the bodies of humans and wildlife.[112]

The chemicals in plastic, in particular, have received significant amounts of attention and one recent study looked at the available information on 10,500 chemicals used to make plastic and found that almost 25% of them were cause for concern since they are persistent, bioaccumulative or toxic.[113] Also troubling was the fact that the study found that there wasn't enough research conducted to know how harmful they may be.[114] For too long, the chemicals industry has been allowed to place chemicals in the marketplace without demonstrating that they are safe for humans and the environment.

A class of toxic chemicals known as poly-fluorinated alkyl substances (PFAS) are commonly used on paper-based food packaging products to make them water or grease repellent. PFAS are linked to kidney and testicular cancer, thyroid disease, decreased fertility, and reduced response to vaccines.[115] California has recently passed laws that will prohibit the use of PFAS in paper-based food packaging, and products that are labelled as either compostable or recyclable – AB 1200 (Ting), AB 1201 (Ting), and SB 343 (Allen). Yet PFAS are used in so many different ways to make so many different products[116] that even these measures may not capture all of the sources of PFAS in food packaging and foodware. These chemicals are so harmful that Maine is phasing out all uses of PFAS,[117] and the European Union is also considering similar action.[118]

Much more action is needed to protect consumers from the wide array of Chemicals of Concern found in food packaging. Therefore, we recommend that specific high priority chemicals and classes of chemicals be banned from these products altogether. The list below was developed by Safer States and its partner organizations and was also informed by UP Scorecard's Food Contact Chemicals of Concern List. Such bans can be incorporated into any of the policies provided in this Playbook and are included in Upstream's Model Policy.

6.3 Ban High Priority Materials

In addition to the issues around chemicals of concern, there are some materials that are made from toxic building blocks which pose significant health concerns, and/or have very high life-cycle impacts on frontline communities and the environment. These materials therefore should not be used for disposable food packaging or foodware.

◊ Additional Resources

- Model Policy
- The UNWRAPPED Project
- Safer States
- UP Scorecard

How Avoid Whack-A-Mole Chemicals Bans

Banning entire classes of chemicals is important to prevent the substitution of similar chemicals from the same class. For example, bans on Bisphenol A used in polycarbonate plastic and epoxy resins has resulted in industry shifting to use slightly different bisphenols that have similar health effects. In order to avoid having to ban chemicals in a class one at a time, like a game of Whack-a-Mole, policies must address entire classes of chemicals rather than just one or two within a problematic class.

Ban List: High Priority Chemicals for Food Packaging

- Ortho-phthalates
- Bisphenols
- Per and polyfluoralkyl substances (PFAS)
- Styrene
- Lead and lead compounds
- Cadmium
- Mercury
- Hexavalent chromium and compounds
- Perchlorate
- Benzophenone and its derivatives
- Formaldehyde
- Halogenated flame retardants
- Toluene

Ban List: High Priority Materials from Disposable Food Packaging

- Polyvinyl chloride
- Polystyrene
- Bamboo that uses resin or another for of binding agent that contains Polyvinyl Chloride, Polycarbonate, Melamine, or a High Priority Chemical

Strategy #7 Ensure a Transition to Non-Toxic Reusables

While some materials that are often used for reusable foodware, such as glass and stainless steel, are generally less toxic than plastic and other disposable materials, not all reusables should be considered to be safe and healthy for consumers or communities. Chemicals on the High Priority Chemicals list provided in Section 6 should not be allowed in reusable food packaging or foodware.

Furthermore, reusables should not be made from materials that present serious health and environmental concerns.

◊ Additional Resources

Model policy

Ban List: Reusable Foodware Materials to Avoid

Polyvinyl chloride made from vinyl chloride, a known human carcinogen.[119]

Polycarbonate made from the endocrine disrupting compounds known as bisphenols, including Bisphenol A, which is listed on California's Prop 65 as harmful to the female reproductive system.[120]

Melamine made from formaldehyde, a known human carcinogen.[121]

Certain kinds of bamboo products. Avoid any bamboo material that uses resin or other binding agent containing PVC, polycarbonate, melamine or a High Priority Chemical

Reduce/Reuse Policy Resources

- Reuse Wins: The environmental, economic, and business case for transitioning from single-use to reuse in food service
- Reducing packaging waste: choose prevention and reuse
- Packaging & Packaging Waste Directive
- Policy recommendations to promote reusable packaging
- Global overview of refillable bottles: A closer look at the data and trends
- Reusable packaging: Existing EU rules on reuse
- Consumer behavior attitudes towards reusable and disposable items: Small changes inspire big ideas
- Reusable vs single-use packaging: A review of environmental impacts
- Final report on the reuse of primary packaging and related country reports (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom)
- Realising Reuse: The Potential for Scaling up Reuse and Policy Recommendations
- Food-to-go, Good to Go? From throwaway to Reuse – Turning the Tide on Pointless Packaging in the Food-to-go Sector

Upstream

This Model Foodware and Packaging Reduction Ordinance can be used to guide policy drafting efforts at the local, state, or federal level. As a whole, it provides a comprehensive approach to building reduction and reuse in food service, while controlling threats to human health posed by high priority chemicals in food packaging, and ensuring that disposable foodware meets specific criteria. The model can be treated like a menu of options. Policy makers select specific provisions to create stand-alone policies, and take a more narrowly focused approach.

Text provided in Red indicates that language needs to be customized based on the jurisdiction.

Appendix A

A Model Foodware and Packaging Reduction Ordinance for City, County, or State Government

Sec. 1: Title

This Chapter X shall be known as the Food Service Packaging Reduction and Reuse Ordinance.

Sec. 2: Findings and Purpose

The City/County/State of XXX finds and declares as follows:

a. The U.S. generates 12% of global waste, but represents only 4% of the world population.[122]

b. The production and disposal of Non-Reusable disposable food and beverage packaging has significant environmental impacts, including the contamination of the environment, the depletion of natural resources, use of non-renewable polluting fossil fuels, and greenhouse gas emissions.[123]

c. Plastic litter breaks down into smaller pieces that are not biodegradable, persist in the environment on land and sea, and are present in most of the world's oceans.[124]

d. Discharge of litter into waters of the United States is prohibited by the Federal Clean Water Act, according to many stormwater permits issued by government agencies around the nation.

e. Plastic debris attracts and concentrates ambient pollutants, such as endocrine disrupters and persistent organic pollutants, in seawater and freshwater that can transfer to fish, other seafood and salt that is eventually sold for human consumption.[125]

f. Nine of the top ten most common debris items found on beaches in the U.S. during International Coastal Cleanup Day are Non-Reusable food and beverage plastic packaging items.[126]

g. Forty percent of all plastic produced globally is used to make packaging and one third of all plastic packaging ends up in the environment.[127]

h. One hundred and twenty (120) billion paper cups are consumed each year in the U.S. (375 per person per year), generating 2.2 billion pounds of waste, consuming over 11 million trees, resulting in 4 billion pounds of carbon dioxide emissions, and requiring the consumption of 35 billion gallons of water to manufacture.[128,129]

i. In the City/County/State of XXX, food and beverage packaging comprises the majority of street litter, and is a significant contributor to the total amount of waste entering the waste stream.

j. Local governments in the U.S. spend $11.5 billion annually cleaning up litter.[130] It is in the interest of the health, safety and welfare of all who live, work and do business in the City/County/State that the amount of litter on public streets, parks and in other public places be reduced.

k. Most disposable foodware is not recyclable after use because it becomes contaminated with food and grease.

l. Many types of disposable foodware are not accepted in commercial compost facilities because they cause contamination and lower the quality and value of compost.[131]

m. Food packaging materials, including food contact papers and compostable paperboard containers and molded plastics, frequently contain harmful poly and perfluoroalkyl chemicals that are linked to serious health impacts.[132]

n. Approximately 12,000 chemicals are used in food packaging. Many of the chemical additives used in packaging are known to migrate into food and beverages.

Hundreds of these chemicals are known to be hazardous to human health and in the environment, many are extremely persistent and bioaccumulative.[133, 134] Switching to just 20% of disposable plastic packaging to reusable offers a $10 billion dollar opportunity for businesses to save money. Eighty-six percent (86%) of disposable foodware can be replaced by reusable options, saving U.S. food businesses $5 billion in procuring disposables, and businesses and local communities can save $5.1 in avoided solid waste management costs, while preventing 17 billion pieces of litter, and creating 193,00 jobs.[135, 136]

o. Eliminating solid waste and litter at its source and maximizing recycling and composting meets the City/State's XXXX goals (cite general plan, litter, stormwater/clean water act, toxics, environmentally preferable purchasing policies, precautionary principle, zero waste, workforce development, budget, liability reduction, resilient landscaping, and/or climate action goals/policies/ordinances/laws to insert).

p. Reducing disposable packaging by eliminating unnecessary items and transitioning to reusable products provides greater environmental benefits than managing the products that become waste, even when recycled or composted.

Sec. 3: Definitions

For purposes of this Chapter, the following definitions shall apply:

"ASTM Standard Specification" means Standard Specification for Compostable Plastics D6400 or Standard Specification for Biodegradable Plastics D6868 as certified by the Biodegradable Products Institute (BPI), as adopted or subsequently amended by the American Society for Testing and Materials (ASTM).

"Beverage Provider" means any business, organization, entity, group, or person that offers liquid, slurry, frozen, semi-frozen, or other forms of beverages to the public for consumption. Beverage provider also includes any organization, group or person that regularly provides beverages to its members or the general public as a part of its activities or services.

"Biodegradable Products Institute" or **"BPI"** is a multi-stakeholder association of key individuals and groups from government, industry, and academia, which promotes the use, and recycling of biodegradable polymeric materials (via composting). The BPI is open to any materials and products that demonstrate that they meet the requirements in ASTM D6400 or D6868, based on testing in an approved laboratory.

"City" means the City of XXX.

"City/County/State Facility" means any building, structure, or vehicle owned or operated by the City/County/State.

"City/County/State Facility Food Provider" means an entity that provides, but does not sell, Prepared Food or Raw Food or Beverages in City/County/State Facilities, including without limitation, hospitals and prisons.

"Compostable" means that an item or material is (1) accepted in City/County/State's available composting collection program as fully compostable, as determined by the Regulatory Agency TBD; (2) is listed, described, or referenced on the Regulatory Agency TBD website as compostable; and (3) as of January 1, 2020 is either certified compostable by the Biodegradable Products Institute, Compost Manufacturing Alliance, and/or other third party recognized by the City/County/State.

"Compost Manufacturers Alliance" is a national certifier of compostable products for compost facilities.

"County" means the County of XXX.

"Contractors and Lessees" means any person or entity that has a contract with the City/County/State for public works or improvements to be performed, for a franchise, concession, or lease of property, for grant monies or goods and services or supplies to be purchased at the expense of the City/County/State, or to be paid out of monies deposited in the Treasury or out of trust monies under the control of or collected by the County.

"Distribute" means the sale, offer for sale, or other transfer of possession of an item for compensation, either as a separate transaction or as part of the sale, offer for sale, or other transfer of possession of another item for compensation.

"Egg Carton" means a carton for raw eggs sold to consumers from a refrigerator case or similar retail appliance.

"Event" means any indoor event at a City/County/State facility, or any outdoor event subject to a City/County/State permit, where more than 100 people attend or participate.

"Event Food Provider" means any Person, Entity, or Non-Profit Vendor selling or providing based on ticket purchase or entrance fee, Prepared Food at an Event.

"Event Producer" means a person or entity who contracts with or obtains a permit from the City/County/State, or an agent acting on the City/County/State's behalf, to hold its own Event, or a City/County/State entity or department holding its own Event.

"Food Container" means a container, bowl, plate, tray, or other vessel used to hold Prepared Food.

"Foodware" means any products used for serving or consuming Prepared Food and includes, but is not limited to, cups, bowls, plates, trays, cartons, boxes, wrapper or liners, hinged or lidded containers (clamshells), and other items used as part of food or beverage service or in which Prepared Food is placed or packaged on a Prepared Food Provider's premises.

"Foodware Accessory" means any type of accessory or accompanying items usually provided alongside Prepared Food in plates, containers, bowls, or cups, including but not limited to utensils, chopsticks, napkins, cup lids, cup sleeves, food or beverage trays, condiment packets and saucers, straws, stirrers, splash sticks, spill plugs, cocktail sticks, and toothpicks.

"Food Provider" means any establishment, provider, Non-Profit Vendor, or business, operating within the City/County/State that sells Prepared Food (1) to the public for consumption on or off its premises, at a catered event, and/or (2) at cafeterias, schools and places of employment, whether or not such establishments are open to the general public. "Food Provider" includes but is not limited to, restaurants, retail food establishments, caterers, cafeterias, stores, shops, retail sales outlets, grocery stores, delicatessens serving the public, mobile or temporary food providers, vehicles or carts, or roadside stands.

"High Priority Chemical" means any of the following chemicals and any chemicals in the following chemical classes: ortho-phthalates; bisphenols; per and polyfluoroalkyl substances (PFAS); lead and lead compounds; cadmium; mercury; hexavalent chromium and compounds; perchlorate; benzophenone and its derivatives; formaldehyde; toluene; and halogenated flame retardants.

"High Priority Material" means any kind of polyvinyl chloride (PVC), polystyrene, polycarbonate, or melamine material, or any bamboo material that uses resin or oth-

er form of binding agent containing PVC, polycarbonate, melamine or a High Priority Chemical.

"Meat and Fish Tray" means a tray for raw meat, fish, or poultry sold to consumers from a refrigerator case or similar retail appliance.

"Natural Fiber" means a plant- or animal-based, non-synthetic fiber, including but not limited to paper, wood, or bamboo. Natural Fiber does not include or contain petroleum-based or biologically-based polymers of any kind.

"Non-Profit Vendor" means a recognized tax exempt organization which provides goods as a part of its services.

"Non-Reusable" means not meeting the definition of Reusable in this Chapter.

"Packing Material" means material used to hold, cushion, or protect items packed in a container for shipping, transport, or storage.

"Person" means an individual, trust, firm, joint stock company, corporation including a government corporation, partnership, non-profit or private entity, agency or institution or other organization or group, however organized association.

"Per and Polyfluoroalkyl Substances" means, for the purposes of food packaging, a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.

"Polystyrene" means a thermoplastic petrochemical material utilizing a styrene monomer, including but not limited to rigid polystyrene or expanded polystyrene, processed by any number of techniques including, but not limited to, fusion of polymer spheres (expandable bead polystyrene), injection molding, expanded polystyrene molding, extrusion-blown molding (extruded polystyrene), and clear or solid polystyrene (oriented polystyrene). Polystyrene is generally used to make cups, bowls, plates, trays, clamshell containers, meat trays, and egg cartons. The resin code for Polystyrene is '6' or 'PS,' either alone or in combination with other letters. This definition applies to all polystyrene foodware, regardless of whether it exhibits a resin code.

"Prepared Food" means food or beverages, which are serviced, packaged, cooked, chopped, sliced, mixed, brewed, frozen, squeezed, poured, or otherwise prepared (collectively "prepared") for individual customers or consumers. Prepared Food does not include raw eggs or raw, butchered meats, fish, raw vegetables or fruit, and/or poultry sold from a butcher case, a refrigerator case, or similar retail appliance.

"Produce Tray" means any tray or carton for raw vegetables or fruit sold to consumers from a refrigerator case or similar retail appliance.

"Raw Food" means any meat, fish, poultry, vegetable, fruit, or egg.

"Recyclable" means material that can be sorted, cleansed, and reconstituted and accepted by the City's/County's available recycling collection programs [for States, insert: "...accepted by 60% of municipal recycling programs within the State of xxx] for the purpose of using the altered form in the manufacture of a new product. The term does not include material that will be burned, incinerated, or converted through gasification, pyrolysis, solvolysis, hydropyrolysis, methanolysis, enzymatic breakdown or a similar chemical conversion process used to transform materials into plastic monomers, chemicals, waxes, lubricants, chemical feedstocks, crude oil, diesel, gasoline, or home heating oil.

"Reusable" means a foodware or beverage bottle designed and manufactured to maintain its shape and structure, and to be materially durable for repeated (at least 750 times each) sanitizing in water at 171 degrees Fahrenheit for at least 30 continuous seconds, washing via commercial dishwashing machine, and reuse. When the product is Returnable, the actual number of use cycles shall meet the following criteria:

- **Cups:** a minimum of 125 uses
- **Utensils:** a minimum of 3 uses
- **Plates:** a minimum of 63 uses
- **Clamshells:** a minimum of 50 uses
- **Glass and plastic bottles:** a minimum of 20 uses

Reusable foodware shall not be made from, treated with, or contain any High Priority Chemicals, High Priority Materials, or aluminum.

"Returnable" means that a reuse system exists in which reusable products can be conveniently returned after use to any locale where such products are provided for delivery of Prepared Food, or the vendor provides a convenient collection option to the customer. Return systems shall have an average return rate of no less than 80 percent for each covered product.

"Standard Condiment" means relishes, spices, sauces, confections, or seasonings that require no additional preparation and that are usually used on a food item after preparation, including ketchup, mustard, mayonnaise, soy sauce, hot sauce, salsa, salt, pepper, sugar, and sugar substitutes or others as determined by the City/County/State.

"State" means the State of XXX.

"Third Party Food Delivery Platform" means a business engaged in the service of online food ordering and/or delivery from a Prepared Food Provider to a consumer.

Sec. 4: Accessories Only Upon Customer Request

[Effective 6-12 months after adoption of ordinance/law.]

a. Prepared Food or Raw Food or Beverage Providers must provide Non-Reusable Foodware Accessories and Standard Condiments in single serve packets only upon request by customers during on-premises dining or when using a third-party food delivery platform.

[OPTIONAL Disability accommodations]. Food providers and beverage providers, as well as City/County/State facilities, City/County/State-managed concessions, City/County/State-sponsored events, and City/County/State-permitted events, may retain and dispense plastic straws as an accommodation to people with disabilities who request them to enjoy equal access to food and beverage services within the City/State/County.

b. Non-Reusable Foodware Accessories and Standard Condiments packaged for single use provided by Prepared Food or Raw Food or Beverage Providers for use by consumers shall not be bundled or packaged in a manner that prohibits a consumer from taking only the type of Non-Reusable Foodware Accessory or Standard Condiment desired without also having to take a different type of Non-Reusable Foodware Accessory or Standard Condiment.

c. A Prepared Food or Raw Food or Beverage Provider may ask a drive-through consumer if the consumer wants a Non-Reusable Foodware Accessory if the Non-Reusable Foodware Accessory is necessary for the consumer to consume ready-to-eat food, or to prevent spills of or safely transport ready-to-eat food.

d. A Prepared Food or Raw Food or Beverage Provider that is located entirely within a public use airport, as defined in Section 77.3 of Title 14 of the Code of Federal Regulations, may ask a walk-through consumer if the consumer wants a Non-Reusable Foodware Accessory if it is necessary for the consumer to consume ready-to-eat food, or to prevent spills of or safely transport ready-to-eat food.

e. (1) A Third-Party Food Delivery Platform shall provide consumers with the option to request Non-Reusable Foodware Accessories or Standard Condiments from a Prepared Food or Raw Food or Beverage Provider

(2) If a Prepared Food or Raw Food or Beverage Provider uses any Third-Party Food Delivery Platform for ready-to-eat food, the Prepared Food or Raw Food or Beverage Provider shall customize its menu with a list of available Non-Reusable Foodware Accessories and Standard Condiments, and only those Non-Reusable Foodware Accessories or Standard Condiments selected by the consumer shall be provided by the Prepared Food or Raw Food or Beverage Provider. If a consumer does not select any Non-Reusable Foodware Accessories or Standard Condiments, no Non-Reusable Foodware Accessory or Standard Condiment shall be provided by the Prepared Food or Raw Food or Beverage Provider.

f. Non-Reusable Foodware Accessories shall conform with Section 10, Non-Compliant Foodware.

Optional for States: Nothing in this section shall prevent a jurisdiction from adopting and implementing an ordinance or rule that would further restrict a Prepared Food or Raw Food or Beverage Provider or a Third-Party Food Delivery platform from providing Non-Reusable Foodware Accessories or Standard Condiments to a consumer.

Sec. 5: Reusable Foodware for Dining on Premises

[Effective 12-18 months after ordinance adoption.]

a. Prepared Food or Raw Food or Beverage Providers shall only serve Prepared Food or Raw Food or Beverage for consumption on the premises using Reusable Foodware, except that Non-Reusable paper food wrappers, foil wrappers, paper napkins, straws and paper tray- and plate-liners shall be allowed for dining on the premises, so long as they meet the requirements of Section 4.

b. Condiments, such as sauces, ketchup, or mustard, provided for on-site consumption must be served in Reusable containers.

c. Consumption is considered on-premises if it takes place at tables and/or seating provided by the Prepared Food or Raw Food or Beverage Provider, either on its own or in conjunction with other Prepared Food or Raw Food or Beverage Providers.

d. New building permits and business licenses for Food Service Providers applied for, renewed, and/or deemed complete after the effective date of this Chapter shall only be granted to Prepared Food or Raw Food or Beverage Providers that can demonstrate adequate capacity to comply with subsection a herein. Installation and/or maintenance of appropriate dishwashing capacity in conformance with Section (a) shall be included as a specific condition of approval for such permits and licenses

e. This requirement does not prohibit a Prepared Food or Raw Food or Beverage Provider from offering, upon a customer's request, Non-Reusable Foodware to take away leftover Prepared Food or Raw Food or Beverage after dining on the premises.

Optional waiver if jurisdiction chooses to include one:

f. Prepared Food or Raw Food or Beverage Providers subject to the requirements of subsection (a) that do not have onsite or off-site dishwashing capacity, or are unable to contract for services to wash, rinse, and sanitize Reusable Foodware, in order to comply with applicable provisions of the insert state Health and Safety Code, may petition the {Director} for a full or partial waiver. To obtain a waiver, the Prepared Food or Raw Food or Beverage Provider must demonstrate inability to comply due to insurmountable space constraints, undue financial hardship, and/or other extraordinary circumstances. Non-Reusable Foodware used pursuant to a waiver obtained under this Section must comply with all requirements set forth elsewhere in this Chapter.

Optional for States: (i) Nothing in this section shall prevent a city, county, city and county, or other local public agency from adopting and implementing an ordinance or rule that would further restrict a Prepared Food Provider or a Third-Party Food Delivery platform from providing Non-Reusable Foodware Accessories or Standard Condiments to a consumer.

Sec. 6: Non-Reusable Beverage Cups and Food Containers Charges

[Effective 12-18 months after ordinance/law adoption.]

a. No Prepared Food shall provide a Non-Reusable Beverage Cup to a customer who is paying for a beverage to take off the premises (i.e. for take-out), unless the Prepared Food or Raw Food or Beverage Provider charges the customer a Non-Reusable Cup charge of at least $0.25 per cup.

b. No Prepared Food Provider shall provide a Non-Reusable Food Container to a customer paying for Prepared Food to take off the premises (i.e. for takeout) unless the Food Provider charges the customer a Non-Reusable Food Container charge of at least $0.25 per Non-Reusable Food Container. A Prepared Food or Raw Food or Beverage Provider shall provide notice of this charge to each customer prior completing the customer's order.

c. Charges for Non-Reusable Cups and Containers shall be identified separately on any post-sale receipt provided and, pre-sale, shall be clearly identified for the customer on media such as menus, ordering platforms, and/or menu boards. Customers placing orders by telephone shall be informed verbally of Non-Reusable Cup and Container charges.

d. Two Optional Approaches:

1. Charge: The $0.25 charge imposed under subsections (a) and/or (b) of this Section shall be retained by the Prepared Food Provider. Third-Party Food Delivery Services that process and/or deliver orders on behalf of Prepared Food Providers and collect payment on behalf of Prepared Food Providers shall remit the $0.25 charge to the Prepared Food Provider.

2. Tax: The Prepared Food Provider shall remit $0.20 of the fee imposed under subsections (a) and (b) of this Section to the City/County/State XXX Fund to support funding for reusable food and beverage systems within the City/County/State.

e. Prepared Food Providers must offer customers paying for a beverage or Prepared Food a Reusable option at a cost no higher than $0.10 that can be returned at the Prepared Food Provider's premises or in a nearby drop off location. The Prepared Food Provider may charge the customer an additional refundable deposit to ensure the return of the Reusable Cup or Container.

f. [No earlier than 18 months, and no later than 24 months], after implementation each of subsections (a) and/or (b) of this Section, the Controller shall perform a separate assessment and review of the economic impact on Prepared Food Providers, both large and small, of the Non-Reusable Cup Charge and the Non-Reusable Food Container Charge. Based on such assessment and review, the Controller shall submit an analysis to the Insert Name of Legislative Body of each charge type. Each analysis shall be based on criteria deemed relevant by the Controller, but shall include a survey of whether and how the charge specifically has impacted Prepared Food Providers' profits and losses and the percentage of to-go beverages and meals served in Reusable Cups or Containers.

g. Prepared Food Providers may not waive or absorb the charges imposed in Subsections (a) and (b) except in the case of economic hardship as demonstrated by any customer provisioning a, at the point of sale, a payment card or voucher issued under the State Special Supplemental Food Program for Women, Infants, and Children (WIC), or the Name of State Department of Social Services Food Stamp Program or an Electronic Benefit Transfer card (EBT), or a MediCare (or State equivalent) benefits identification card (BIC).

h. Customers may provide their own Reusable Beverage Cup or Container for food or beverage service. Prepared Food Providers may refuse, at their sole discretion, any customer-provided Reusable Cup or Container that is an inappropriate size, material, or condition for the intended beverage or food item or that appears to be soiled or unsanitary. Prepared Food Providers may instead require use of a Reusable Cup or Container provided by the Prepared Food Provider for a beverage or food item to be consumed on the premises, or a Non-Reusable Cup that confirms to the requirements of section 5, along with any charge required pursuant to this Section.

Optional waiver if jurisdiction chooses to include one:

i. Any Prepared Food Provider may petition the Director of Insert Regulatory Agency for a full or partial waiver of the requirements of this Section 8, except those set forth in subsections (a) and (b), for a period of up to one year at a time, if the owner or operator can demonstrate that application of the specified provisions of this Section would create undue hardship or practical difficulty for the Prepared Food Provider not generally applicable to other Prepared Food Providers in similar circumstances.

Sec. 7: Reusable Beverage Cups At Events

[Effective 18-24 months after adoption.]

a. Event Producers providing beverages at Events must ensure that 25% of beverages served to attendees are in returnable or customer-provided Reusable Beverage Cups. Within 4 years of adoption of this Chapter, a minimum of 50% of beverages provided at events shall be provided to attendees in Reusable Cups.

b. To meet the requirement in subsection (a), Event Producers may provide, lend, or sell Reusable Beverage Cups to Event attendees, and incentivize attendees to bring their own Reusable Beverage Cups. A permit application for any Event must indicate how the requirement in subsection (a) shall be met. The Event Producer's selected method for meeting the requirement in subsection (a) must be included in any contract, agreement, or permit for the Event.

c. Use, handling, and sanitation of Reusable Beverage Cups at Events must comply with all applicable state and local laws, regulations, and guidelines.

Optional waiver if jurisdiction chooses to include it:

d. Any Event Producer may petition the Director for a full or partial waiver of the requirements of this Section as they apply to a particular Event, if the Event Producer can (1) demonstrate that the Event Producer is not able to access Reusable Beverage Cups for the Event, or (2) that the application of this Section would create undue hardship or practical difficulty for the Event Producer that is not generally applicable to other Event Producers in similar circumstances.

Sec. 8: Non-Reusable Cups at Government Facilities Prohibited

Effective 12-18 months after adoption.

a. No person may sell or distribute beverages in Non-reusable cups at or on City/County/State property, including a City/County/State office, office building, or food concession located on City/County/State property.

b. All new leases, permits, management agreements or other agreements awarded by the City/County/State allowing any person to use City/County/State property, including a City/County/State Street, for purposes that contemplate or would allow the sale or distribution of beverages shall specifically require that the permittee comply with (a) of this section. This requirement shall also apply to any such permit renewed, extended, or materially amended after [insert date].

c. It shall be the City/County/State policy that beverages served on City/County/State property shall be served in Reusable cups.

Sec. 9: Sale or Distribution of Non-Compliant Foodware Prohibited

(Effective within 6-12 months of enactment]

a. No person may sell, offer for sale, or otherwise Distribute within the City/County/State (1) any Non-Reusable Foodware that is not either (Compostable or Recyclable to be determined based on that which can be either composted or recycled in local waste management programs), (2) any Non-Reusable Foodware made, in whole or in part, from Polystyrene , (3) any Non-Reusable stirrers, splash sticks, cocktail sticks, or toothpicks made with plastic, including compostable, bio- or plant-based plastic, or (4) any Non-Reusable Foodware that is made from, treated with, or contains any High Priority Chemicals or High Priority Materials.

b. The Director of Insert Regulatory Agency may adopt a list of suitable alternative Compostable or Recyclable Non-Reusable Foodware products, that the Director determines meet the standards for what is Compostable and/or Recyclable under this Chapter and are reasonably affordable. The Director shall regularly update the list. If a product is included on the Director's list, it will be deemed to comply with this Section.

Sec. 10: Use Of Non-Compliant Foodware Prohibited

[Effective 6-12 months after ordinance adoption.]

a. Prepared Food or Raw Food or Beverage Providers may not sell, offer for sale, or otherwise Distribute Prepared Food or Raw Food or Beverages (1) in Non-Reusable Foodware made, in whole or in part, from Polystyrene, (2) in Non-Reusable Foodware that is not (Compostable or Recyclable – to be determined based on that which can be either composted or recycled in local waste management programs), or (3) in Non-Reusable Foodware that is is made from, treated with, or contains any High Priority Chemicals or High Priority Materials.

b. City/County/State Facility Prepared Food or Raw Food or Beverage Providers may not provide Prepared Food or Raw Food or Beverage to City/County/State Facilities (1) in Non-Reusable Foodware made, in whole or in part, from Polystyrene, (2) in Non-Reusable Foodware that is not Compostable or Recyclable – to be determined based on that which can either be composted or recycled in local waste management programs, or (3) in Non-Reusable Foodware that is is made from, treated with, or contains any High Priority Chemicals or High Priority Materials.

c. City/County/State Departments may not purchase, acquire, or use Non-Reusable Foodware for Prepared Food or Raw Food or Beverage (1) where the Non-Reusable Foodware is made, in whole or in part, from Polystyrene, (2) where the Non-Reusable Foodware is not Compostable or Recyclable – to be determined based on that which can be either composted or recycled in local waste management programs, or (3) where the Non-Reusable Foodware is is made from, treated with, or contains any High Priority Chemicals or High Priority Materials

d. City/County/State contractors and lessees may not use Non-Reusable Foodware for Prepared Food or Raw Food or Beverage in City/County/State Facilities and while performing under a City/County/State contract or lease (1) where the Non-Reusable Foodware is made, in whole or in part, from Polystyrene, (2) where the Non-Reusable Foodware is not Compostable or Recyclable – to be determined based on that which can be either composted or recycled in local waste management programs, or (3) where the Non-Reusable Foodware is is made from, treated with, or contains any High Priority Chemicals or High Priority Materials. All new leases and permits authorizing the sale of food and beverages at the City/County/State Airport and all renewals, extensions, or material amendments thereto, must incorporate terms requiring the lessee or permittee to comply with the terms of this Chapter.

e. The Director may adopt a list of suitable alternative Compostable or Recyclable (to be determined) Non-Reusable Foodware products, which means Non-Reusable Foodware products that the Director determines serve the same intended purpose as non-compliant products, meet the standards for what is Compostable and/or Recyclable under this Section and are reasonably affordable. The Director shall regularly update the list.

If a product is included on the Director's list, it will be deemed to comply with this Section. If a product is not included on the Director's list, the person using the product as Non-Reusable Foodware will have the burden of establishing to the Director's satisfaction that the product complies with this Section.

f. It shall not be a violation of this Section to sell, provide, or purchase Prepared Food packaged in Non-Reusable Foodware otherwise prohibited by subsections (a) through (c), or to use Non-Reusable Foodware otherwise prohibited by subsection (d), if the Prepared Food or Raw Food or Beverage is packaged outside the City/County/State and is sold or otherwise provided to the consumer in the same Non-Reusable Foodware in which it originally was packaged. Businesses packaging Prepared Food outside the City/County/State are encouraged to use Non-Reusable Foodware that is Compostable or Recyclable – to be determined – is made from, treated with, or contains any High Priority Chemicals or High Priority Materials and is not made, in whole or in part, from Polystyrene.

Note: requiring Non-Reusable Foodware to be recyclable or compostable does not prohibit the use of plastic, unless the plastic cannot be recycled or composted locally. Your jurisdiction may opt for a more direct prohibition on plastic foodware using language such as: "Disposable Foodware shall not be made of plastic, including compostable, bio- or plant-based plastic."

Sec. 11: Other Expanded Polystyrene Products

a. No Person shall sell, offer for sale, or otherwise Distribute for compensation within the unincorporated area of the City/County/State:

1. Packing Materials, including shipping boxes and packing peanuts;
2. coolers, ice chests, or similar containers;
3. pool or beach toys; or
4. dock floats, mooring buoys, or anchor or navigation markers; made, in whole or in part, from Expanded Polystyrene that is not wholly encapsulated or encased within a more durable material.

b. No Person shall sell, offer for sale, or otherwise Distribute for compensation within the City/County/State, Meat and Fish Trays, Produce Trays, and Egg Cartons made, in whole or in part, from Expanded Polystyrene, or that are not Compostable or Recyclable, either as separate items or as part of the sale of raw meat, fish, poultry, vegetables, fruit, or eggs sold to consumers from a refrigerator case or similar retail appliance.

c. No Person shall sell, offer for sale, or otherwise Distribute within the City/County/State any Packing Materials made, in whole or in part, from Expanded Polystyrene, as prohibited in subsection (a), or that are not Compostable or Recyclable. For purposes of this Section, Distribution of Packing Materials shall include using such materials to hold, cushion, or protect items to be packed in a container for shipping, transport, or storage, for compensation, where the packing takes place within the City/County/State.

d. For purposes of this Section, Distribution of Packing Material shall not include:

1. Receiving shipments within the City/County/State that include Expanded Polystyrene, or some other non-Compostable and non-Recyclable product, used as Packing Material;

2. Re-using Packing Materials within the City/County/State for shipping, transport, or storage within the same distribution system, where the Packing Materials are not sent to a consumer or end user;

3. Donating used Packing Materials within the City/County/State to another person, where the donor receives nothing of value for the donated Packing Materials; or.

4. Using Packing Materials donated under subsection (d)(3) for shipping, transport, or storage, where the person using the Packing Materials receives nothing of value for the donated Packing Materials.

Sec 12: Implementation

a. The Director is authorized to promulgate regulations, guidelines and forms and to take any and all other actions reasonable and necessary to implement and enforce this Chapter. The Director may require maintenance of records and provision of such records upon the Director's request as a condition of a full or partial waiver provided for in this Chapter.

b. Nothing in this Chapter shall conflict, or be construed to conflict, with the Americans with Disabilities Act, the Unruh Act, the Disabled Persons Act, or other applicable laws concerning the rights of individuals with disabilities. In particular, nothing in this Chapter shall restrict, or be construed to restrict, the availability of Non-Reusable plastic straws to individuals who may require and request the use of Non-Reusable plastic straws.

c. The Department shall conduct multi-lingual public outreach and education, including providing information to educate affected Prepared Food Providers, businesses, and customers, about the provisions of this Chapter.

Sec. 13: Enforcement and Penalties

a. Any person or entity may provide notice or complaint to the Director of any observed lack of compliance with the requirements of this Chapter. The Director shall provide a publicly available online option for such notification or complaints.

b. The Director shall issue a written warning to any person he or she determines is violating any section of this Chapter. If after issuing a written warning of violation from the Director, the Director finds that person continues to violate the aforementioned provisions the Director may apply for or impose the various sanctions provided in this Section.

c. Any person who violates this Chapter shall be guilty of an infraction. If charged as an infraction, upon conviction thereof, said person shall be punished for the first offense by a fine of not more than $100 for a first violation; not more than $200 for a second violation in the same year and not more than $500 for each subsequent violation in the same 12-month period.

d. The Director may issue an administrative fine to any person violating any section of this Chapter in accordance with Administrative Code XXX, which is hereby incorporated by reference.

e. The City/County/State Attorney may seek legal, injunctive, or other equitable relief to enforce this Chapter, including without limitation, civil penalties in an amount not exceeding $100 for the first violation, $200 for the second violation, and $500 for each subsequent violation in any given 12-month period.

f. The City/County/State may not recover both administrative and civil penalties pursuant to subsections (c) and (d) for the same violation. Penalties collected under subsections (c) and (d), which may include recovery of enforcement costs, shall be used to fund implementation and enforcement of this Chapter.

Sec. 14: Severability

If any section, subsection, sentence, clause, or phrase of this Chapter is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of the Chapter. The Insert Legislative Body hereby declares that it would have passed this Chapter and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of this Chapter would be subsequently declared invalid or unconstitutional.

Sec. 15. No Conflict With Federal Or State Law

This Chapter is intended to be a proper exercise of the City/County/State's police power and role as a market participant, to operate only upon its own officers, agents, employees, and facilities, and other persons acting within the City/County/State's boundaries, and not to regulate inter-city or interstate commerce. Nothing in this Chapter shall be interpreted or applied so as to create any requirement, power or duty in conflict with any federal or state law.

Upstream

Leveraging the purchasing power of government, especially at the scale of purchasing represented by the state of California, can have enormous impact. Current Environmentally Preferable Purchasing (EPP) policies for the state of California prioritize post-consumer recycled content, energy efficiency, durability, reduced air emissions, and water efficiency. Prioritizing reduce, reuse, and repair should be at the core of government procurement policies. Agencies can specify purchase and use of reusable products for government meetings, events, and offices and prohibit the purchasing of specific throw-away items such as disposable beverage and foodware containers. Agencies can also incorporate repairability into procurement.

Appendix B

A Model Source Reduction Purchasing Policy

Sec. 1: Statement of Policy

It is the policy of [Organization] to:

Institute practices that reduce waste by increasing product efficiency and effectiveness;

Purchase products that are reusable, refillable, and avoid unnecessary packaging.

Sec. 2: Purpose

This Policy is adopted in order to:

Conserve natural resources,

Minimize environmental impacts such as pollution and use of water and energy,

Reduce materials that are landfilled,

Increase the use and availability of reusable and refillable products and packaging that protects the environment,

Reward manufacturers and vendors that reduce environmental impacts in their production and distribution systems or services by offering reusable and refillable packaging and reducing unnecessary single-use packaging.

Sec. 3: Strategies For Implementation

3.1 Source Reduction

3.1.1 Institute practices that reduce waste, encourage reuse, and result in the purchase of fewer products.

3.1.2 Purchase remanufactured products such as toner cartridges, tires, furniture, equipment and automotive parts.

3.1.3 Consider short-term and long-term costs in comparing product alternatives. This includes evaluation of total costs expected during the time a product is owned, including, but not limited to, acquisition, extended warranties, operation, supplies, maintenance and replacement parts, disposal costs and expected lifetime compared to other alternatives.

3.1.4 Purchase products that are durable, long-lasting, reusable or refillable and avoid purchasing one-time use or disposable products.

3.1.5 Request vendors to eliminate packaging or use the minimum amount necessary for product protection.

3.1.6 Specify a preference for packaging that is reusable, recyclable, or compostable when suitable uses and programs exist.

3.1.7 Encourage vendors to take back and reuse pallets and other shipping materials.

3.1.8 Encourage suppliers of electronic equipment, including but not limited to computers, monitors, printers, and copiers, to take back equipment for reuse or environmentally sound recycling when [the Organization] discards or replaces such equipment, whenever possible. Suppliers will be required to state their take back, reuse or recycling programs during the bidding process.

3.1.9 Consider provisions in contracts with suppliers of non-electronic equipment that require suppliers to take back equipment for reuse or environmentally sound recycling when [the Organization] discards or replaces such equipment, whenever possible. Suppliers will be required to state their take back, reuse, or recycling programs during the bidding process.

3.1.10 Promote electronic distribution of documents rather than printing or copying.

3.1.11 When producing paper documents, print and copy all documents on both sides to reduce the use and purchase of paper. Printers and copiers shall be set to default to duplex.

3.1.12 Reduce the number and type of equipment needed to perform office functions to save energy and reduce purchasing and maintenance costs. Eliminate desktop printers, redundant network printers and reduce the number of fax machines leased or owned by [the Organization]. Consider lease or purchase of multi-function devices.

3.2 Prohibited Single-use Products

3.2.1 Single-use beverage containers will not be provided for offices, events, and on-site catering.

3.2.2 Single-use foodware (utensils, plates, cups, bowls, condiment packets, straws) will not be provided for offices, events, and on-site catering.

3.3 Office Design Requirements

3.3.1 Foodservice, and break rooms in government office buildings will be equipped with high-efficiency automatic dishwashing, water refill stations, and re-usable foodware and accessories, such as straws and condiments.

This policy shall take effect on [date].

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