



MARCH 2019

INTRODUCTORY REPORT ON SINGLE USE FOOD SERVICE WARE POLICIES

PREPARED BY THE CITY OF KIRKLAND SOLID WASTE DIVISION



SINGLE USE PLASTIC

ENVIRONMENTAL IMPACTS OF SINGLE USE PLASTIC

Single use plastics, whether plastic bags, straws, or forks, have similar characteristics of being used once, then disposed, in huge quantities every day.

Many single use plastics are not recyclable in curbside recycling systems, including plastic bags, foam takeout containers, plastic takeout containers, and plastic utensils and straws. Even among items where drop-off recycling options exist, such as expanded polystyrene foam and plastic bags, the vast majority of material is disposed as trash, not recycled.

Plastic is persistent in our landfills, in our environment, and in our streams, lakes, and oceans. Plastic does not decompose like organic materials; instead, over time, plastic in the environment degrades into smaller particles called microplastics. Because of their minute size and pervasive presence, at this time it is not possible to clean up existing environmental microplastics in any impactful way.

Plastic products are made using petroleum, which is a non-renewable resource. Estimates indicate that around 50% of annual plastic production is destined for single use packaging and products (National Geographic). Disposable food service ware accounted for approximately 0.4 percent (by weight) of solid waste generated in the United States in 2015, approximately 1.1 million tons (Environmental Protection Agency). Less than 14 percent of plastic packaging, which is the fastest-growing form of packaging, gets recycled (Natural Resources Defense Council).

If plastic use continues unchecked, scientists predict there will be more plastic by weight than fish in the ocean by 2050. Data indicate that a number of sources contribute to plastic in the oceans, including fishing gear and single use food and beverage containers.

Less than 14% of plastic packaging gets recycled.

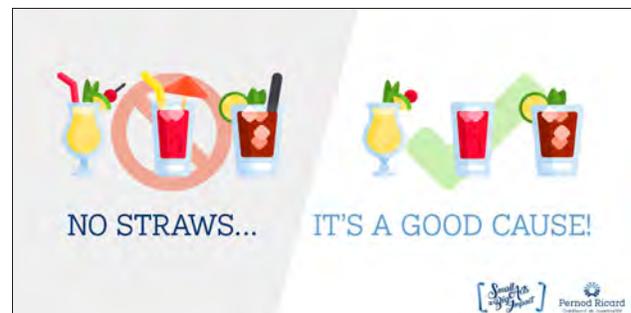
VOLUNTARY REDUCTION INITIATIVES

Grassroots initiatives to reduce the use of disposable plastic items have gained popularity in recent years. Environmental organizations such as Surfrider Foundation, 5 Gyres, and Lonely Whale have organized voluntary single use plastic reduction initiatives involving educational pieces and consumer pledges. In September 2017, the “Strawless in Seattle” campaign released celebrity videos encouraging people to “stop sucking” and partnered with local restaurants to voluntarily stop serving plastic straws.

Large corporations are beginning to voluntarily shift away from certain single use food service items. McDonald’s pledged to stop using foam cups and other packaging globally by the end of 2018. Alaska Airlines began phasing out plastic stir straws and citrus picks, and American Airlines, United Airlines, and Delta Air Lines announced similar plans. Starbucks plans to eliminate use of plastic straws by 2020.



Example of a voluntary straw reduction campaign by the National Union of Students in the UK



Wine and spirit group Pernod Ricard announced in 2018 that it would no longer use non-biodegradable plastic straws and stirrers at affiliate events and in advertising

More than 100 US cities, counties and states ban foam food service ware.

SINGLE USE PLASTIC SERVICE WARE POLICIES

Single use plastics bans are rapidly gaining attention as an opportunity for governments to protect the environment. Policies range in the materials limited and alternatives required, showing the wide range of possible actions in response to the challenges of single use disposable items. Unlike plastic bag reduction policies, where many policies are very similar, there are many vastly different versions of single use plastic food service ware reduction and expanded polystyrene ordinances.

More than 100 jurisdictions have banned expanded polystyrene (foam) food service ware in the United States since the late 1980s. In Washington State, Seattle and Issaquah were the first jurisdictions to institute bans on foam food packaging.

Plastic straw bans are emerging as recent priorities for governments and environmental organizations. Seattle became the first city to ban plastic straws in 2018. The European Union recently agreed on new measures to ban single use plastic items including cutlery, straws, and expanded polystyrene food containers and cups. Starting in 2019, full-service restaurants in California are prohibited from providing plastic straws except by request.

Plastic straws are seen as often unnecessary single use plastics that can be dramatically reduced through policy action. Plastic straws are neither the biggest component of ocean trash nor the key plastic threat to ocean health, but many view reducing use of plastic straws as an actionable item that encourages consumers to pay more attention to their use of other disposable plastic products.

This report captures basic information on the potential target materials and the variety of potential policy options that could reduce the amount of foam food service ware and single use plastics in the city.



The City of Vancouver, BC, is developing a comprehensive single use item reduction strategy with policies addressing foam takeout containers, other takeout containers, disposable straws and utensils, shopping bags, and disposable drink cups

DISPOSABLE FOOD SERVICE WARE

FOAM FOOD SERVICE WARE

THE MATERIAL EXPANDED POLYSTYRENE

Polystyrene is a type of plastic commonly used in consumer goods. It can be solid or foamed.

Expanded polystyrene (EPS) is a lightweight insulating plastic foam, commonly but inaccurately referred to as Styrofoam™ (see sidebar). Rigid and tough, EPS is widely utilized because it is light, cheap, flexible and multi-functional.

EPS is seen most often in the food service industry as food containers such as trays, plates, bowls and cups and packaging for consumer products such as electronics.



EPS foam food service ware

EPS VERSUS STYROFOAM™

Expanded polystyrene (EPS) is not Styrofoam™. Styrofoam™ is a distinct material created and trademarked by the Dow Chemical Company, though the name Styrofoam™ is informally used to refer to all forms of polystyrene. Styrofoam™ is extruded polystyrene foam (XPS), widely used as insulation in the construction industry, as an insulator in appliances like refrigerators, and in crafts and model building.

ENVIRONMENTAL ISSUES ASSOCIATED WITH EPS

The features that make EPS appealing for packaging also cause it to impact the environment.

EPS is typically not collected curbside because it breaks apart at the recycling center and is often contaminated with food residue. Clean EPS has limited recycling options through events such as Kirkland's Styrofest events. EPS collected for recycling is extruded into EPS ingots by local processors such as StyroRecycle, located in Kent, WA. Ingots are used by manufacturers to reconstitute the recycled plastic into durable materials such as decking.

Most EPS foam food service containers are used once and discarded. When used in food service, EPS is often too dirty to recycle due to food residue and staining, and must be disposed of as garbage.

When EPS is sent to the landfill, it takes more than 500 years to decompose. In addition, because it is so lightweight, EPS can be blown out of trash receptacles or the landfill and become litter, where it is easily transported by waterways and storm water collection systems into bodies of water. EPS has had negative environmental impacts in marine ecosystems, due to its propensity to break into smaller pieces that are easily ingested by wildlife.

PLASTIC STRAWS AND UTENSILS

Plastic straws and utensils are typically made out of polystyrene or polypropylene. There are varying estimates of how many plastic straws and plastic utensils are used in the US. World Centric estimates 40 billion plastic utensils are used annually in the US. Market research firm Technomic estimates that 170 million straws are used daily in the US, while other sources estimate higher numbers ranging from 390 to 500 million straws used daily. Regardless of exact figures, plastic straws and utensils are a focus of policy actions, as organizations and municipalities work to reduce single use plastics and as more environmentally-friendly alternatives to single use plastic utensils and straws become available.



Graphic created by awareness campaign "The Last Plastic Straw," based on the 500 million straws per day estimate

ENVIRONMENTAL ISSUES ASSOCIATED WITH PLASTIC STRAWS AND UTENSILS

Plastic straws and utensils cannot be recycled in our commingled recycling system because they are too small to be sorted, and must be disposed of as garbage. Due to consumer confusion, they are often mistakenly placed in recycling or compost carts, and act as a contaminant that is difficult to remove.

Like EPS, plastic straws and utensils gradually fragment into microplastics in the environment, both on land and in the ocean.



CONSIDERATIONS FOR SINGLE USE REDUCTION POLICIES

There has recently been movement to reduce or eliminate use of foam food service ware and single use plastics like bags, straws, and utensils. There is a significant range in the types of reduction policies that have been adopted, ranging from voluntary reduction to bans. Citywide ordinances that specifically ban foam food service containers (as opposed to EPS packaging and other materials) for all businesses are the most common type of EPS foam reduction policy. Recently, plastic straw bans have also become more common, with the City of Seattle banning plastic straws in July 2018.

Below is a discussion of some of the important aspects of plastic reduction policies to illustrate the variety of approaches taken by local jurisdictions across the region and United States.

RESTRICTED ITEMS

Policies may restrict a single product type (e.g. foam food service ware or plastic straws only), or may affect multiple classes of products. Many food service ware bans include all types of food service ware, including foam food service ware, plastic utensils and straws (e.g. Seattle's policy).

Some food service ware policies ban items but include temporary exemptions, sometimes extended for years, to allow the market for acceptable alternatives to expand before removing the exemption. For example, Seattle's policy currently exempts metal foil-faced papers, small portion cups, and long-handled thick plastic soda spoons.

SUBSTITUTION

If foam food service ware is banned, it's important to consider the items that will replace it. Potentially, other single use plastic items will be used and they may need to be disposed of as trash. This is a consideration if overall goals are to reduce disposables headed to the landfill.

ACCEPTABLE ALTERNATIVES

There are many alternatives to foam food service ware, including potentially recyclable or compostable options. Some ordinances simply ban foam food service ware and do not require the use of specific alternatives, while others not only ban foam food service ware but also mandate that alternatives be recyclable or compostable (e.g. Seattle's policy), or compostable only (e.g. Alameda's policy). Current recycling market conditions make it challenging to find recyclable alternatives for many food service ware products.

RESTRICTED ITEM EXAMPLES



foam food service ware



plastic utensils and straws

EXAMPLE ALTERNATIVES



example disposable alternatives

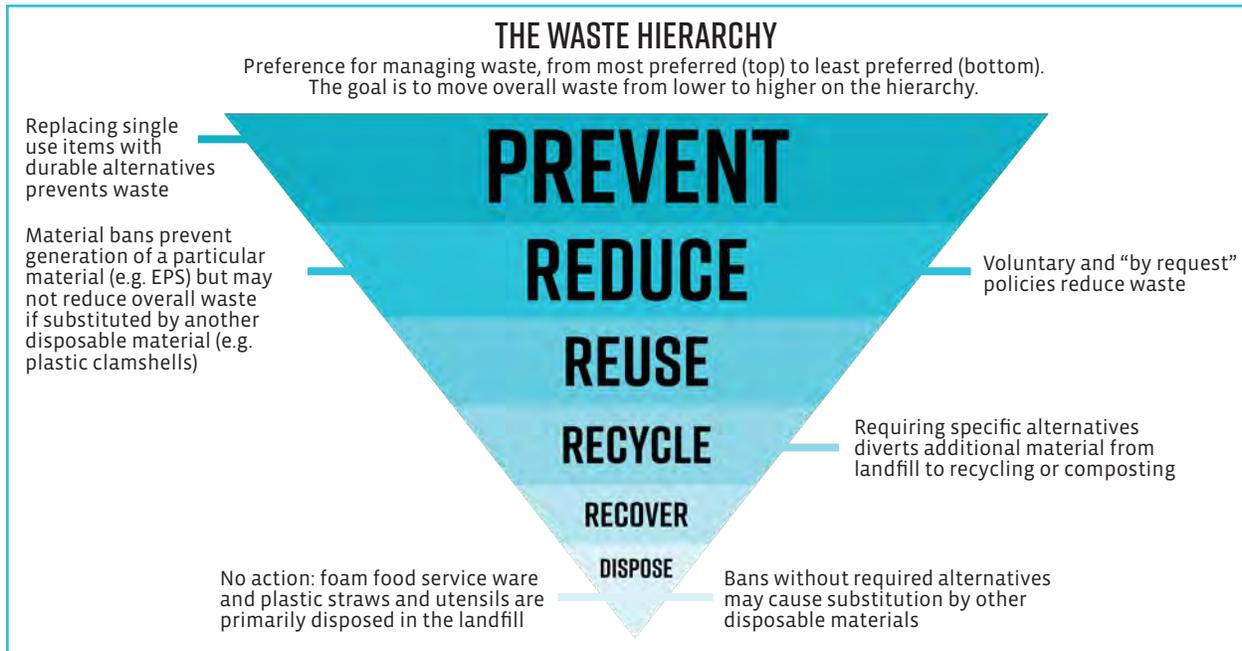


example recyclable alternatives (if clean)



example compostable alternatives

For plastic straws and utensils, many policies simply ban the provision of either at retail and restaurants, and require that if offered, the items be durable (reusable) or compostable. Compostable alternatives are now available for most products, though generally at a higher cost than disposable plastics. A recent search for products showed a foam clamshell container available for \$0.09/each, and a compostable fiber clamshell available for \$0.20/each.



SCOPE OF THE REDUCTION POLICY

In some cases, reduction policies may be imposed on only certain types of businesses, or for internal use by municipalities only. The City of San Diego, for example, originally had a ban on EPS for service contracts with the city, and recently expanded their ban citywide. Cities may consider city-wide reduction policies, or start by banning the purchase of these items for city use, or banning their use at city facilities or events. Cities can utilize Environmental Preferable Purchasing programs to establish guidelines for acceptable types of products.

PHASE-IN PERIOD

Many ordinances are implemented in phases, giving retailers time to use up existing stock before switching to acceptable service ware. A phase-in period also offers sufficient time for City staff to conduct education and outreach to businesses and the community. In 2016, Kirkland provided businesses with one year of advance notice before the Plastic Bag Reduction Policy ordinance took effect.

ENFORCEMENT

Many ordinances have a monetary fine built in to encourage businesses to comply. For the City of Kirkland’s Plastic Bag Reduction Policy, violations are enforced through the standard code enforcement monetary penalties outlined in Kirkland Municipal Code Section 1.12, though no penalties have been issued since staff took a passive, educational approach to enforcement.

ORDINANCE EXAMPLES

SEATTLE, WASHINGTON

In 2008, the City of Seattle enacted an ordinance requiring single use food service items, including packaging and utensils, to be recyclable or compostable. The first phase, effective January 1, 2009, banned foam food service ware without a requirement of alternatives. After 18 months, all single use food service ware was required to be compostable or recyclable. Seattle Public Utilities temporarily exempted certain items, including plastic utensils and straws, until July 1, 2018, when utensils and straws were no longer exempt due to increased options for approved compostable utensils and straws.

Straws and utensils now must be durable or compostable. Disposable flexible plastic drinking straws are allowed when needed by customers due to medical or physical condition.

The City of Seattle doesn't allow food and compostable paper in the garbage. Businesses that generate food waste or compostable paper must subscribe to a composting service, or self-haul their food waste to a transfer station for processing. Businesses pay for compost service.

SEATTLE POLICY ELEMENTS

- Foam food service ware, plastic straws and plastic utensils banned
- Requirement for food service ware to be compostable or recyclable
- Requirement for straws and utensils to be durable or recyclable
- Phase-in period for alternatives



Outreach graphic explaining City of Seattle's straw and utensil policy

ISSAQUAH, WASHINGTON

In 2009, the Issaquah City Council adopted an ordinance banning polystyrene foam food service ware and requiring businesses to use only recyclable or compostable food service packaging. Through this policy, businesses are also required to participate in and pay for a commercial food waste composting service. Issaquah's policy currently includes temporary exemptions for cutlery, straws, and other specific single use food service items.

ISSAQUAH POLICY ELEMENTS

- Foam food service ware banned
- Requirement for food service ware to be compostable or recyclable
- Temporary exemption (currently in place) for plastic straws and cutlery

ALAMEDA, CALIFORNIA

In September 2017, Alameda City Council passed the Alameda Disposable Food Service Ware Reduction Law, requiring businesses to: only provide (compostable paper or reusable) straws on request, encourage customers to go reusable, and only provide compostable fiber-based packaging for to-go items. Many compostable options on the market are biobased plastics, which can look like plastic but are compostable – Alameda’s policy does not allow these options and instead is only allowing fiber based compostable options. If it looks like plastic, it is not compostable in Alameda’s system, so it is not permitted.

ALAMEDA POLICY ELEMENTS

- Foam food service ware, plastic utensils and plastic straws banned
- Straws by request only
- Requirement for food service containers to be compostable fiber
- Requirement for straws to be compostable paper or durable



Outreach graphic explaining City of Alameda’s disposable food service ware policy

SAN FRANCISCO, CALIFORNIA

In 2006, San Francisco passed a food service waste reduction ordinance prohibiting the use of foam food service ware and requiring the use of compostable or recyclable food service ware by restaurants, retail food vendors, municipal departments and municipal contractors. It allowed businesses to apply for a one-year waiver with proof of “undue hardship”. San Francisco staff made an effort to visit every establishment to conduct outreach in advance of implementation.

SAN FRANCISCO POLICY ELEMENTS

- Foam food service ware banned
- Requirement for food service containers to be compostable or recyclable
- Undue hardship extension

SAN JOSE, CALIFORNIA

The City of San Jose’s foam food container ordinance went fully into effect January 1, 2015, and requires all restaurants to use non-foam food service ware for both dine-in and takeout. Their ordinance allows restaurants to choose what alternative products to offer. The City of San Jose’s website offers information on other products and pricing.

SAN JOSE POLICY ELEMENTS

- Foam food service ware banned

VANCOUVER, BC, CANADA

In May 2018, Vancouver City Council approved a comprehensive zero waste strategic plan, Zero Waste 2040. In this plan's Single Use Item Reduction Strategy, Vancouver became the first city in Canada to ban plastic straws and foam cups and takeout containers, effective June 1 2019. Vancouver's Single Use Item Reduction policy also requires disposable utensils to be given out only if customers ask for them, rather than receiving them automatically. Vancouver is currently developing their implementation plans and are considering bylaw amendments to require items be recyclable or compostable.

NEW YORK, NEW YORK

Starting January 1, 2019, New York city stores and food service establishments may no longer offer single use expanded foam food containers like takeout clamshells, cups, plates, bowls and trays. EPS foam is still allowed for raw meat or when prepackaged before arriving at the store. The policy allows businesses to choose any alternative products. Businesses have a 6-month grace period before fines will be assessed.

BERKELEY, CALIFORNIA

In 1988, Berkeley was one of the first cities to ban all polystyrene foam food service ware. In January 2019, the City of Berkeley passed a Single Use Disposable Foodware and Litter Reduction Ordinance. This multifaceted ordinance requires use of only compostable disposables, a 25 cent fee on all takeout cups, and the provision of durable dishware for eating on premises. The Ordinance is set to be fully implemented by January 1, 2022, with a phase-in plan beginning January 1, 2020.

VANCOUVER POLICY ELEMENTS

- Foam takeout containers, foam cups and plastic straws banned
- Plastic utensils by request



An educational campaign raises awareness about single use packaging in advance of implementation of Vancouver's policy

NEW YORK POLICY ELEMENTS

- Foam food service ware banned
- Grace period for enforcement

BERKELEY POLICY ELEMENTS

- Foam food service ware banned (in previous policy)
- All single use food service items must be compostable
- Durable dishware must be provided for eating on premises
- 25-cent fee must be charged for all takeout cups

SUMMARY OF POSSIBLE POLICY ROUTES

Detailed descriptions of each policy follow, along with considerations, examples, and benefits and drawbacks to each approach.

LESS REGULATION

NO REQUIREMENTS

OPTION 0: TAKE NO ACTION

OPTION 1: VOLUNTARY REDUCTION

BAN FOAM FOOD SERVICE WARE ONLY

OPTION 2: BAN FOAM FOOD SERVICE WARE ONLY



OPTION 3: BAN FOAM FOOD SERVICE WARE ONLY, DISPOSABLE STRAWS + UTENSILS BY REQUEST ONLY

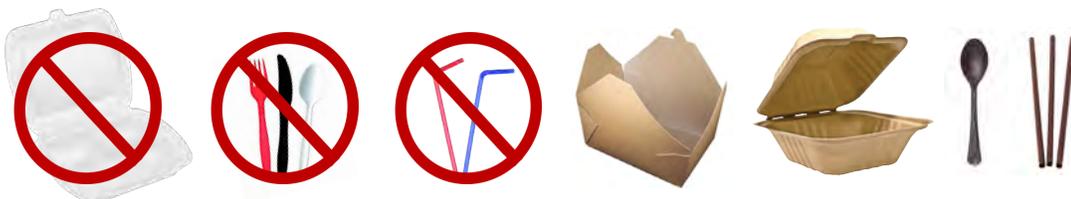


BAN FOAM FOOD SERVICE WARE, PLASTIC STRAWS AND UTENSILS

OPTION 4: BAN FOAM FOOD SERVICE WARE, PLASTIC STRAWS + UTENSILS



OPTION 5: BAN FOAM FOOD SERVICE WARE AND PLASTIC STRAWS + UTENSILS, AND REQUIRE SPECIFIC ALTERNATIVES



MORE REGULATION

ANALYSIS OF POSSIBLE POLICY ROUTES

NO REQUIREMENTS

OPTION 0: TAKE NO ACTION

The Council could take no action, and continue existing service offerings and education.

BENEFITS

- No requirements for businesses

DRAWBACKS

- No impact on use of single use food service ware

OPTION 1: VOLUNTARY REDUCTION

These types of policies educate businesses and customers about the problems with foam food service packaging and single use plastic disposable items.

CONSIDERATIONS

Voluntary reduction programs allow flexibility for businesses and require no enforcement. These policies may not be effective in reaching quantitative goals, however.

EXAMPLE

The City of Santa Cruz, CA, first had a voluntary foam food service policy, but later enacted restrictions after the voluntary program did not meet targets.

BENEFITS

- No requirements for businesses
- City can educate and engage with residents about the environmental impacts of their personal choices

DRAWBACKS

- Unlikely to make significant reduction in use of single use food service ware
- Number of businesses willing to voluntarily reduce use of foam food service ware and plastic utensils and straws may be limited

Example of a voluntary educational approach to plastic straws from the City of Fremont, CA



BAN FOAM FOOD SERVICE WARE ONLY

OPTION 2: BAN FOAM FOOD SERVICE WARE ONLY

Ban policies typically focus on foam food service containers (as opposed to EPS packaging or other uses). A ban on would require businesses to stop using all foam food service ware, including cups, clamshell containers, and plates. Businesses would choose whatever alternative products they want.



EXAMPLE

The City of San Jose, CA, bans foam food service ware and does not regulate alternatives.

BENEFITS

- Simple requirements for businesses
- Consumers typically support reduction of foam food service ware

DRAWBACKS

- Businesses could choose to use another disposable alternative to foam, which would likely not significantly reduce plastic waste
- Would not reduce use of single use plastic utensils or straws

OPTION 3: BAN FOAM FOOD SERVICE WARE ONLY, DISPOSABLE STRAWS AND UTENSILS ON REQUEST

This policy direction would require businesses to stop using all foam food service ware, and only provide disposable straws and utensils on request. Businesses would choose alternative products to use in place of the foam food service ware. Plastic straws and utensils could still be given out, but would likely be reduced.



EXAMPLE

The City of San Diego recently enacted a policy to ban foam food service ware and require businesses to only provide plastic straws and utensils upon request.

CONSIDERATIONS

This type of policy would require training and education of businesses and consumers, and would necessitate enforcement to ensure the policy is followed.

BENEFITS

- Consumers typically support reduction of foam food service ware
- Would cause some reduction in single use utensils and straws
- Single use plastic straws would still be widely available for those with medical needs

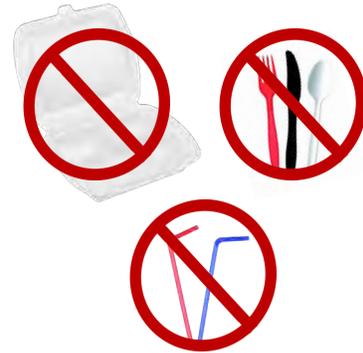
DRAWBACKS

- Businesses could choose to use another disposable alternative to foam, which would not reduce waste generated
- Would not completely eliminate use of disposable utensils and straws
- Ban versus “on request” could be slightly more difficult to communicate and / or enforce

BAN FOAM FOOD SERVICE WARE, PLASTIC STRAWS AND PLASTIC UTENSILS

OPTION 4: BAN FOAM FOOD SERVICE WARE AND PLASTIC STRAWS AND UTENSILS

This type of policy would ban foam food service ware, plastic straws, and plastic utensils. Recently, many policies have been implemented focusing on banning plastic straws, due to their lack of recyclability and the existence of compostable and durable alternatives. Plastic utensils are also being considered by some with these policies because of their similar characteristics to straws. Businesses have the choice of what products to offer instead.



CONSIDERATIONS

Businesses may switch to a different disposable alternative to replace foam food service ware.

BENEFITS

- Simple requirements for businesses
- Would eliminate unnecessary use of plastic utensils and straws

DRAWBACKS

- Businesses could choose to use another disposable alternative to foam, which would not reduce waste generated
- While plastic straws would be exempted for medical use, businesses might be less likely to keep them on hand for customers

Examples of accepted food service ware alternatives for businesses in San Jose, CA, where foam food service ware is banned but there are no requirements for alternatives. The City provides a list of recommended alternatives.



OPTION 5: BAN FOAM FOOD SERVICE WARE AND PLASTIC STRAWS AND UTENSILS, AND REQUIRE SPECIFIC ALTERNATIVES

These policies include the ban of foam food service ware, plastic straws, and/or plastic utensils and require specific products be used in their place.

CONSIDERATIONS

Most food service product providers do have recyclable or compostable options available. These types of policies would necessitate education on acceptable alternatives. Compostable products would need to be accepted by the City's compost processor, Cedar Grove.

Requiring recyclable or compostable alternatives can be challenging in the face of changing recycling markets, and also can still be hard for customers to understand appropriate disposal after use. For example, plastic clamshells are no longer accepted in recycling in Kirkland. Future changes in recyclable alternatives would need to be communicated to businesses. Additionally, even recyclable food service products are likely to be food soiled. Food is a contaminant in recycling.

A more straightforward option for consumers and businesses would be to only allow compostable alternatives, like Alameda's policy.



EXAMPLE

City of Seattle's policy requires that foam food service ware replacements be recyclable or compostable, and straw and utensil replacements be durable or compostable.

BENEFITS

- Eliminates foam food service ware and plastic straws and utensils
- Allows City to specify alternative food service ware products
- Potentially greatest reduction in waste

DRAWBACKS

- Could be complicated for businesses
 - Significantly more staff time needed to educate and / or enforce policy
 - Greater expense for businesses
 - Potential for increased contamination in recycling and/or compost
 - Compostable straws and utensils would be disposed in trash if compost service was not available
 - Potentially greater expense for City ratepayers if businesses join existing, rate-subsidized compost program
 - While plastic straws would be exempted for medical use, businesses might be less likely to keep them on hand for customers
-