



A Guide to **Sustainable Serviceware**

for Restaurants and Food Prep Businesses

Navigating
new rules in Colorado's
**PLASTIC POLLUTION
REDUCTION ACT**
plus tips for reducing
plastics and saving
costs.



Sustainability,
Climate Action
& Resilience

eco-cycle

We know you're busy...

so we've produced a guide to make it as easy as possible for you to avoid polystyrene products in compliance with Colorado's new law.

Beginning January 1, 2024, restaurants and food prep businesses in Colorado will no longer be allowed to use polystyrene foam (often mistakenly referred to as Styrofoam®) to serve food or beverages. So, what to use instead? Are some packaging choices better for the environment than others? How much will these alternatives cost?

This guide will help you navigate your serviceware choices based on their level of sustainability. You'll also learn other ways your business can offer sustainable options to customers, some of which can save your business money.

THANK YOU to Boulder County's Partners for a Clean Environment for their significant contributions to this guide.



Compost rules have changed in Front Range communities

Only food scraps, plants and yard trimmings are accepted in curbside compost bins. All compostable products and packaging must go in the trash, even if they are certified compostable. These new rules, set by compost manufacturer [A1 Organics](#), help prevent plastic, glass and other contaminants from making their way into our compost stream. [Learn more about the changes on A1 Organics' website.](#)

Inside This Guide

Product Guide for Containers, Cups & Accessories

page 1

This graphic guide shows you options for packaging food, from BEST to WORST choices for the environment.

Containers for Dry/Solid Foods

page 2

Containers for Wet/Moist Foods

page 3

Containers for Beverages

page 4

Accessories

page 5

How to Consider Your Options: Reduce, Reuse, Recycle, Compost & Landfill

page 7

Learn more about what went into our criteria for determining what is BEST and what is WORST and find helpful tips and additional resources to make the most informed choices for your business.



THE VERY BEST: Your Options for REDUCING Waste in the First Place

page 8



BEST: Your Options for REUSE and Avoiding Single-Use Products

page 10

- REUSABLE Product Options

page 11



GOOD: Your Options for RECYCLABLE Alternatives to Disposable Products

page 12

- RECYCLABLE Product Options

page 13



OKAY: Your Options for COMPOSTABLE Alternatives to Disposable Products

page 14

(only applicable to regions where compostable products are accepted in compost streams)

- COMPOSTABLE Product Options

page 15



WORST: What Must Be Landfilled & What to Avoid

page 16



THE WORST OF THE WORST: The Most Important Products to Avoid

page 17



Product Guide

for Containers, Cups & Accessories



Containers for Dry/Solid Foods

BEST CHOICES

WORST CHOICES



| REUSABLES | RECYCLABLES | COMPOSTABLES | LANDFILL | AVOID |
|--|--|---|--|---|
| <p>Durable/Washable</p>  <hr/> <p>Subscription reuse services</p>  <p>Encourage customers to bring their own containers for leftovers</p>  | <p>Aluminum</p>  <hr/>  <hr/> <p>Recyclable plastics</p>  <p>Check local recycling guidelines to determine which plastics are recyclable.</p> | <p>Compostable serviceware is NO LONGER ACCEPTED by our regional composter. These items must be LANDFILLED.</p>  <hr/>  <p>Only approved certified compostable 3 gallon (or smaller) countertop bags are currently accepted in compost bins.</p> | <p>Plastic-coated papers</p>  <hr/>  <hr/>  <hr/>  | <p>#6 Polystyrene</p>  <hr/> <p>Black plastics and #3 PVC & #7 PC plastics</p>  |

Containers for Wet/Moist Foods

BEST CHOICES

WORST CHOICES



| REUSABLES | RECYCLABLES | COMPOSTABLES | LANDFILL | AVOID |
|--|--|---|--|---|
| <p>Durable/Washable</p>  <hr/> <p>Subscription reuse services</p>  <p>Encourage customers to bring their own containers for leftovers</p>  | <p>Aluminum</p>  <p>Lids containing paper must be landfilled; aluminum base and lids are recyclable.</p> <hr/> <p>Recyclable plastics</p>  <p>Check local recycling guidelines to determine which plastics are recyclable.</p> | <p>Compostable serviceware is NO LONGER ACCEPTED by our regional composter. These items must be LANDFILLED.</p>  <hr/>  <p>Only approved certified compostable 3 gallon (or smaller) countertop bags are currently accepted in compost bins.</p> | <p>Plastic-coated papers</p>     | <p>#6 Polystyrene</p>  <hr/> <p>Black plastics and #3 PVC & #7 PC plastics</p>  |

Containers for Beverages

BEST CHOICES

WORST CHOICES



| REUSABLES | RECYCLABLES | COMPOSTABLES | LANDFILL | AVOID |
|-----------|-------------|--------------|----------|-------|
|-----------|-------------|--------------|----------|-------|

Durable/Washable

Encourage customers to bring their own mug or cup

Aluminum

Glass

Plastic

#2 HDPE and #5 PP "souvenir" cups accepted

Compostable serviceware is NO LONGER ACCEPTED by our regional composter. These items must be LANDFILLED.

Only approved certified compostable 3 gallon (or smaller) countertop bags are currently accepted in compost bins.

Plastic-coated papers

Non-recyclable plastics

#6 Polystyrene

Other Serviceware

| | UTENSILS | NAPKINS | STRAWS | LIDS |
|---------------|--|--|---|--|
| BEST OPTION |  <p>Reusable utensils</p> |  <p>Reusable cloth napkins</p> |  <p>No straws—provide only upon request</p> |  <p>No lids—provide only upon request</p> |
| BETTER OPTION |  <p>Single-use cutlery selected by customer or provided only upon request</p> |  <p>Paper napkins in a dispenser or provided only upon request</p> |  <p>Bamboo or paper straws (selected by customer)</p> |  <p>Lid with no straw</p> |
| WORST OPTION |  <p>Wrapped, bundled, single-use utensils</p> |  <p>Large quantities of paper napkins</p> |  <p>Plastic straws</p> |  <p>Lid with straw</p> |

Other Serviceware

| | CONDIMENTS | STIRRERS | TOOTHPICKS | BAGS |
|---------------|---|---|--|---|
| BEST OPTION |  <p>Customer access to bulk condiment dispensers</p> |  <p>Reusable stirrers</p> |  <p>No toothpicks</p> |  <p>Repurposed box or customer-provided reusable bag</p> |
| BETTER OPTION |  <p>Single-use condiment packets provided only upon request</p> |  <p>Uncooked noodle or wooden stirrer</p> |  <p>Unwrapped wood toothpick in a dispenser</p> |  <p>100% recycled paper bag</p> |
| WORST OPTION |  <p>Large quantities of condiment packets automatically provided to customer</p> |  <p>Single-use plastic stirrers</p> |  <p>Plastic toothpick</p> |  <p>Plastic bags</p> |

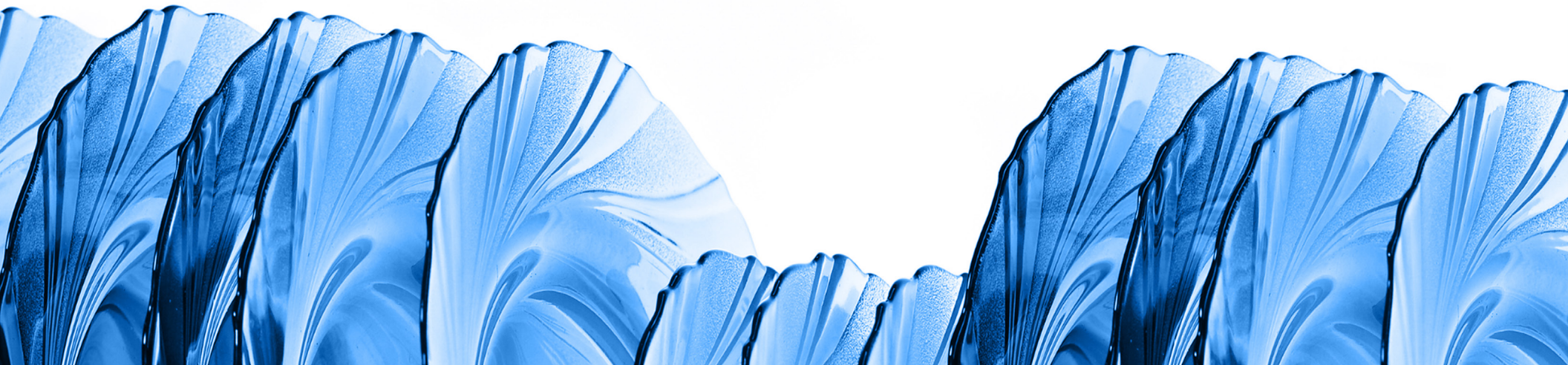
VERY BEST ↔ **WORST**

How to Consider Your Options

Including Reduce, Reuse, Recycle, Compost & Landfill

What is best for the environment may also be best for your bottom line!

Here's the criteria that went into determining Best and Worst in our product guide, and what to keep in mind when deciding what's right for your business.





THE VERY BEST

Your Options for REDUCING Waste in the First Place

Before recycling and composting, reducing is best, and there are easy ways to do it.

Environmental Considerations

The best way to reduce harm to our environment caused by cutting down trees for paper, or mining and drilling for ores and fossil fuels, is to avoid the creation of packaging altogether. **No packaging means no environmental destruction and no pollution. It also means a cost savings for you!**

Customer Service and Employee Retention Considerations

Numerous polls and studies show that consumers want to support companies that reduce packaging and make it easy for them to make more environmentally friendly choices when purchasing items and food. Additionally, many employees take pride in knowing they work for a company that cares about doing the right thing.

Reducing Packaging = Saving Money

Going package-free saves your business money, but exactly how much could you save? The [Clean Water Action Fact Sheet](#) provides examples of cost savings from eliminating single-use items through reuse or reduction efforts. [Upstream's Chart Reuse Tool](#) allows businesses to calculate their actual projected savings by making the shift to reducing and/or reusing.

The following chart shows potential cost savings from providing items by request only or by allowing customers to select the items they need.



Download Beyond Plastic's ["Hold the Plastic, Please: A Restaurant's Guide to Reducing Plastic"](#) for ideas on training staff and promoting your plastic reduction efforts, plus other great tips on waste reduction in restaurants.

| Current Scenario | | | | | | Reduction Scenarios | Reduce by 50% | | Reduce by 75% | | Reduce by 90% | |
|-------------------------------------|----------------|-----------------------------|------------------------------------|-------------------------|----------------|---------------------|-------------------------|----------------|-------------------------|----------------|-------------------------|---------------|
| Item | Cost per item* | Avg. # of customers per day | Avg. # of units given per customer | Units provided per year | Cost per year | | Units provided per year | Cost per year | Units provided per year | Cost per year | Units provided per year | Cost per year |
| Straw | \$0.01 | 150 | 1 | 54,750 | \$548 | | 27,375 | \$274 | 13,688 | \$137 | 5,475 | \$55 |
| Ketchup packet | \$0.05 | 150 | 3 | 164,250 | \$8,213 | | 82,125 | \$4,106 | 41,063 | \$2,053 | 16,425 | \$821 |
| Utensil packet (fork, spoon, knife) | \$0.04 | 150 | 1 | 54,750 | \$2,190 | 27,375 | \$1,095 | 13,688 | \$548 | 5,475 | \$219 | |

*Cost based on prices for items on webstaurantstore.com as of July 2023.

It's Easy to Reduce Single-Use Items

- Train employees to ask customers which single-use items they need rather than automatically providing utensils, condiment packages, straws, etc.
- Let customers choose the single-use items they need from utensil or condiment dispensers rather than automatically giving them out at checkout.
- Provide bulk condiment dispensers instead of or alongside single-use packets for customers who are dining in or dressing their food before carrying it out.
- If providing utensils and straws, offer them unwrapped and unbundled.
- Share your company's commitment to waste reduction! Educate your employees and customers about the cost and environmental benefits of reducing single-use items. Post about your efforts to reduce waste on social media.



BEST

Your Options for REUSE and Avoiding Single-Use Products

Providing reuse choices for your customers is easier than you might think—even for smaller businesses with limited dishwashing capacity.

Environmental Considerations

Investing in durable dining ware for “for here” customers saves water and reduces environmental impacts after only a few washes. For example, according to [Upstream’s report, “Reuse Wins”](#):

- After only two washes, stainless steel cutlery breaks even with disposable cutlery when comparing the environmental impacts of producing these items. After that, every usage increases the environmental benefits of the reusable cutlery.
- Using and washing one ceramic cup 500 times consumes only 53 gallons of water compared to 500 paper cups, which consume nearly 370 gallons of water to produce.

Reuse = Saving Money

The average savings for small businesses switching to reusables is [between \\$3,000 and \\$22,000](#) annually! For takeout, encourage your customers to bring their own to-go boxes or cups with the help of signage or by offering a discount for “BYO box or cup.” **Some municipalities offer financial incentives to businesses that switch to reusables and/or are working with companies that provide reusable to-go systems for restaurants.**

Reusable products are less susceptible to supply chain disruptions. Once your business owns the items you use (or is partnered with businesses that provide reuse systems, like [Ozzi](#), [DeliverZero](#), or [r.Cup](#), which are active in Colorado), challenges in sourcing food serviceware are greatly reduced or eliminated.

Do you own a business in the city of Boulder?

Explore [reuse incentives offered by the city.](#)



SAVINGS TIP: Many companies that provide reuse systems will collect dirty containers! You don’t have to own the containers OR wash them! The City of Boulder is offering \$1500 worth of free reusable takeout container services to restaurants who try them out. Also be sure to check out [PACE’s program](#) for reuse incentives throughout Boulder County.

REUSABLE Product Options

What to do when reusables break?

When reusable items break, they don't necessarily have to be landfilled. Some can be recycled through special collection programs. For example, the [City of Boulder/Eco-Cycle Center for Hard-to-Recycle Materials \(CHaRM\)](#) collects ceramics, glassware, #2 and #5 durable plastics, and scrap metal for recycling.

REUSABLE Product Options

Ceramic, glass, stainless steel and durable plastic are all good options for reusables. These materials can transfer heat, so if used for serving hot food, you may want to consider designs with handles or insulated walls. There are three common ways to use reusable serviceware:

- Purchase reusable items and clean them in-house.
- Contract with a [business that specializes in providing reusable serviceware](#). That company will provide the needed items and a drop-off collection system where your customers return them. The company will then sanitize the items and return cleaned inventory to you. Some companies will sell the inventory to you, while others own the inventory and there is no cost to your business. Instead, customers pay only a nominal fee.
- Encourage your customers to bring their own mugs or take-out containers (that they fill themselves from a reusable “for here” plate) by offering discounts or reminding them to bring their own. Reminders work best via social media, text message and/or signs at your business.



USEFUL RESOURCES

- PlasticFreeRestaurants.org provides funds for restaurants and schools looking to move away from single-use: plasticfreerestaurants.org/subsidy
- Upstream's report "Reuse Wins" shows how a restaurant's choice to reuse beats single-use every time: upstreamolutions.org/reuse-wins-report



Your Options for RECYCLABLE Alternatives to Disposable Products

After looking at ways to reduce and reuse, you may prefer one of the many recyclable alternatives to polystyrene and other disposables.

Environmental Considerations

While reducing and reusing are best, choosing products and packaging that are recyclable is the next best thing. We say “next best” because there is an environmental cost to every new product, even if it can be recycled. This cost lies in the process of making the product—from the extraction of natural resources to transportation to get it to a store. Paper comes from clear-cut forests, metals must be mined, and plastics are made from fossil fuels. Once these natural resources have been extracted, it’s critical to keep them in circulation through recycling to prevent further resource extraction.

Some materials are more recyclable than others. **Aluminum, steel, and glass are all infinitely recyclable.** As long as customers put them in the recycling bin, they can go through the recycling process over and over again. Products made from these materials are very likely to contain recycled content. **Most single-use plastics must be landfilled,** but for the relatively few plastics that are recyclable, they can go through the recycling process only once or twice. When choosing plastic to-go containers, buy #1 PETE, #2 HDPE, or #5 PP bottles, tubs, jars or clamshells. Avoid all #3 PVC, #6 PS or #7 PC items, as well as black plastics. **Most paper products used in the food industry are coated in plastic and are therefore not recyclable.** If purchasing plastic or paper, choose products that include post-consumer recycled content and avoid paper products coated with plastic.

Cost Considerations

This toolkit does not measure single-use materials by cost, since cost for items varies by brand and as markets shift. The up-front cost of reusable products is higher than recyclable containers, but multiple studies have shown that replacing single-use items with reusables and/or reducing the number of single-use items provided per transaction can save food businesses thousands of dollars per year!

RECYCLABLE Product Options



Aluminum

Soda cans, food tins, foil and other aluminum items are infinitely recyclable. Cans should not be crushed. Aluminum foil and food tins should be clean and rolled into balls 2" or larger in diameter before placing in the recycling bin. Automatic sorting equipment at recycling facilities separates flat, two-dimensional items from three-dimensional items. So, flattened aluminum can be missorted into the paper!

Recycle It Right!

Make recycling as easy as possible for your customers! Provide well-marked recycling bins with signage to make sure the right items go in it. Trashing recyclable materials wastes valuable resources, and those with large amounts of food on them cause problems in recycling systems. It is critical to provide well-marked recycling collection bins with signage to capture recyclable materials.



Glass

Glass bottles and jars (like pickle or salsa jars) are also infinitely recyclable. Be sure to put metal lids that are larger than 2" in diameter in recycling SEPARATE from the glass jar, so each material goes to the correct market. Drinking glasses and canning jars cannot be recycled in curbside bins because they do not melt at the same temperature as single-use bottles and jars.

Better recyclable plastics (#1 PETE, #2 HDPE, and #5 PP)

Plastics labeled with a #1, #2, or #5 have the strongest plastic recycling markets regionally. Look for products that include post-consumer recycled content. Attach plastic lids to empty plastic containers or jars before recycling. Small plastics like condiment cups are too small to be recycled.



Check local guidelines to see what is recyclable in your area.

USEFUL RESOURCES

- [Eco-Cycle's Recycling Guidelines for Boulder County](#)
- [Eco-Cycle's Quick Guide to Plastics](#) helps you know which plastics are better and which should be avoided.



Your Options for COMPOSTABLE Alternatives to Disposable Products

Note: This option only qualifies as “good” if your business is in a community that composts certified compostable products. **Cities and towns in Boulder County no longer accept compostable products for composting. These items now belong in the trash. Please consider recyclable or reusable alternatives.**

Environmental Considerations

Even if a product can be composted and kept out of the landfill, it still impacts our environment. Paper comes from clear-cut forests and plant-based plastics are often made from plants grown specifically to produce compostable products, requiring pesticides, petrochemical fertilizers, fuel for farming equipment, and lots of water.

[One example of these environmental impacts](#) for a compostable item can be found in chopsticks. The equivalent of 3.8 million trees go into the manufacture of about 57 billion disposable pairs of chopsticks annually in China alone. About 45% of disposable chopsticks are made from trees like cottonwood, birch, and spruce, while the remainder are made from bamboo, which is technically a grass.

Cost Considerations

This toolkit does not measure single-use materials by cost, since cost for items varies by brand and as markets shift. The up-front cost of reusable products is higher than single-use, but multiple studies have shown replacing single-use items with reusables (like reusable chopsticks) and/or reducing the number of single-use items provided per transaction can save cafes, food trucks, and restaurants thousands of dollars per year!

USEFUL RESOURCES:

- [Eco-Cycle’s Clean Compost Campaign toolkit](#) provides everything you need to generate clean compost for communities where compostable serviceware is not accepted.
- [Eco-Cycle’s Compost Guidelines Poster for Restaurants](#) for areas that do NOT accept compostable products can be downloaded, printed, and posted above your compost bins.



What Must Be Landfilled & What to Avoid

Disposables bound for the landfill aren't necessary—they can largely be avoided.

Environmental Considerations

Unfortunately, most of the disposable products that make their way into our trash bins have a troubling history and a sad future: they're mostly made from finite, nonrenewable natural resources such as natural gas and petroleum. Even renewable resources, like trees, often come from clear-cut forests that were part of an ecosystem that provided habitat and helped reverse climate change by absorbing carbon. The production and throwing away of disposable products, especially plastics, are clogging up our waterways and oceans, contributing to the climate crisis and taking a huge toll on the natural world.

Containers and packaging alone contribute [over 23% of the material reaching landfills in the United States](#), and a recent study found that 18% of ocean plastics are plastic food containers, cutlery, straws and wrappers. An estimated 40 BILLION non-recyclable, petroleum-based plastic forks, spoons, and knives are used every year in the U.S. alone. So much of this material will wind up in our environment, where it will remain indefinitely, likely breaking up into microplastics that can make their way into our soil, water and bodies.

Cost Considerations

This toolkit does not measure products by cost, since cost for items varies by brand and as markets shift. The upfront cost of reusable products is higher than disposables, but multiple studies have shown replacing disposable items with reusables and/or reducing the number of single-use items provided per transaction can save food businesses thousands of dollars per year!

USEFUL RESOURCES

[Eco-Cycle's Landfill Guidelines](#) can be downloaded, printed and posted above your landfill (trash) containers.



THE WORST OF THE WORST: The Most Important Products to Avoid

#6 Polystyrene

Both #6 PS (polystyrene) plastic and polystyrene foam – sometimes called by the brand name Styrofoam® – is one of the worst plastics for the environment and human health. The United States [Department of Health and Human Services](#) identifies this material as “reasonably anticipated to be a human carcinogen,” and reports that exposure to it is linked to “increased risks for leukemia, lymphoma, or all lymphohematopoietic cancer.” Because it is light weight, pieces of it are often blown or washed into the environment where animals can easily mistaken it for food.



Black Plastics

Black plastics are very challenging and expensive to recycle. Some optical sorters that automatically separate plastics cannot sort these opaque containers, so they must be sorted by hand. Currently, there is no market for some black plastics. They have historically been hard-to-recycle products.



Cling wrap is an example of a #3 PVC plastic

#3 PVC and #7 PC Plastics

#3 PVC (polyvinyl chloride) and #7 PC (polycarbonate) plastics are considered among the most toxic plastics to produce and the most difficult to recycle.

Learn more about these plastics at ecycle.org/harmful-plastics.



Recycling and Compost Guidelines

Recycling and compost guidelines vary across the state. Your local community, recycling operator, or waste hauler can provide information on what materials are recyclable or compostable where you live. They should also be able to provide signage to place above collection bins to educate your customers and employees on how to properly sort their waste materials. Guidelines can also be printed from ecocycle.org.

Check out the City of Boulder's [Waste Sorting 101 Web Guide](#) for more waste resources.

Not sure whether the polystyrene foam ban applies to your business, or have more questions about the new Colorado law? Contact a PACE consultant for one-on-one advising.

PACEpartners.com | 303-786-7223 | info@PACEpartners.com

And visit ecocycle.org to find our [PPRA toolkit](#) with all the information and tools you need to navigate and benefit from Colorado's new law.

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