



— REUSABLE — PLATE PROGRAM



HOW - TO HANDBOOK



The innovative and pioneering spirit that is embodied in Planet Bluegrass' Sustainable Festivation is exactly the type of program that Boulder County's Zero Waste Funding desires to support. The Reusable Plate Program is a great example of a creative sustainable solution that has an immediate tangible impact in which people participate and see the effects of, through reducing what is purchased, reducing waste produced and more thoughtful consumption, first hand. We are happy to see Planet Bluegrass tackle the proliferate issue of single-use disposable foodware addressed on a grassroots level and are hopeful that other festival organizers will see its success and create reusable plate programs of their own. We are sure festival goers will remember the unique experience they have at Planet Bluegrass events and think fondly of how they helped reduce the amount of trash produced at the festivals!

— The Resource Conservation Division of Boulder County



INTRODUCTION



In 2016, we introduced our Reusable Plate Program at RockyGrass and Folks Festivals in Lyons, Colorado. After three years of practice and lessons learned, we are proud to share this program with fellow event organizers. In this handbook, we detail the technical hurdles, the issues with local health code compliance, the metrics used to track and improve our process, and the environmental benefits realized through our efforts.

When approaching your own waste reduction efforts, begin by contacting your local county office and inquire about state/county/or city efforts to reduce waste. Most states have begun incentivizing waste reduction efforts and can provide insight into local partners that can help your program succeed. We would not have been able to accomplish what we did without partnering with the Boulder County Community Outreach Program for Zero Waste Funding.

A reusable plate and utensil program increases the value of your event experience. Your attendees will dine using sturdy plates and real utensils, just like in a restaurant! We hope this information provides the resources necessary to implement a reusable program at your next event.

PLANNING A PROGRAM

1. Research your local health codes & variance processes

In order to establish our Reusable Plate Program at RockyGrass and Folks Festivals, we were required to submit a Variance Request, to the Boulder County Public Health Department and the Colorado Department of Public Health and Environment, for a variance from Colorado Retail Food Establishment Rules and Regulation 10-106 (Single –Service Articles). The current regulation states: “All temporary retail food establishments shall provide only single-service articles for use by the consumer.”

Contact your local health department and familiarize yourself with local health codes. Your health department may ask you to prove the following:

- You have sanitary, food safe storage and transportation methods
- Your washing process meets restaurant standards for cleanliness, water temperature and pressure, sanitation, drying methods, and grey water waste disposal
- Your plates are made to withstand rigorous use and washing that could hold up in a similar restaurant situation
- If you run out of reusables or the washing system becomes inoperable at any point, you are stocked and ready with enough single-use plates and utensils (ideally, made from compostable materials) for your food vendors, so that food service cleanliness is never compromised

2. Explore funding options

There are many ways to fund the cost of a Reusable Plate Program; there is not a one-size-fits-all approach. While we have covered the majority of the cost ourselves, we received financial assistance from Boulder County's Zero Waste Funding Program and by implementing a small food vendor fee to cover the cost of replacing plate inventory. Other events, such as Pickathon Festival, implement a deposit system, where an attendee pays a small fee to have their own plate and utensils throughout the event. Whatever you decide, make sure that you can fund not only the setup costs but also the maintenance costs each year, so that your program may become financially viable and self-sustaining over time.

Consider which funding options might be the best fit for your event:

- To what extent is your company willing and able to fund the program?
- Do you have access to local funding assistance, such as our partnership with Boulder County's Zero Waste Funding Program?
- Can you recoup costs from your event ticket sales?
- Are your food vendors willing and able to share in the cost?

3. Gathering & Maintaining Inventory

To assess inventory needs, we began by surveying food vendors about what types of single-use items they were ordering for each event. Keep in mind that simpler is better: the more plate and bowl variety you plan to offer, the more complicated your overall process will be due to dishwasher capacity, stacking, storage, and tracking. In the end, we settled on four items: one 8 oz. bowl, one 16 oz. oval style bowl/tray, one small 8.5" plate, and one large 11" plate.

Other key factors to consider: where to purchase your plates/bowls, what type of material they are made of, and whether or not you'd like them branded. Keep in mind: whatever material your reusable plates are made of, they must be fabricated with safe materials and designed for durability of a commercial setting, including hot water temperatures and sanitizers. Reusables cannot impart odor, color or taste, nor in any manner that may contribute to the contamination of food. (Shop around and ask for samples, so that you can try out different products before you buy!) We partnered with Bamboo Studio out of California, to design commercial grade plates and bowls made from a sustainable mixture of bamboo, sugarcane, and corn to fit our vendors' needs. These plates are made to withstand commercial dishwashing conditions, are 100% biodegradable and are made without harmful chemicals. We decided to brand our plates and bowls with our logo along with fun reusability language, "Please Return Me Unabused, I'll Be Washed and Reused." The good news is our Festivarians loved them! The bad news is, the branding gave our plates a desirable souvenir quality, which contributed to significant plate loss the first year of the program.

With the introduction of reusable utensils, we decided to buy 6,000 new stainless steel forks and spoons - no knives. We wanted to avoid branded bamboo utensils, as these would have been more expensive and even easier to keep than plates, which would not support our encouragement to return all plates and utensils to us for wash and reuse.



Below is a breakdown of our starting inventory each year of the program. As you can see, we slowly increased our overall inventory to be able to keep up with our demand, and with each year, we learn more about which inventory to increase. For example, Sisters Dumplings is a high-demand food vendor at our events, so in 2019, we are planning to increase our oval bowl inventory at a much higher percentage than increasing our other inventory. There is a sort of “goldilocks zone” with the amount of inventory we keep on hand. We do not want to have too much inventory because the plates will not be used and reused enough times to make them break even from an environmental standpoint; however, we do not want to provide too little inventory, resulting in us having to use compostable products.

PLATE INVENTORY

Item	2016	2017	2018
Oval Bowls	768	769	948
18 oz. Bowls	612	583	748
8.5" Plates	720	732	892
11" Plates	648	644	760

EVENT ATTENDANCE

Lastly, it's important to consider how much inventory you will need on hand based on your festival attendance. For reference, our paid attendance at both RockyGrass & Folks Festivals is approximately 4,000 per day. Our inventory must be able to support that amount of traffic during mealtimes.

Inventory Factors to Consider:

- What types of plates/bowls will you need to support your food vendors?
- Are the plates and bowls washable in a commercial setting?
- Based on your event attendance, how much of each item should you have on hand?
- How quickly can you collect, wash and return plates to the system?
- How many plates can stack in a bucket? Fit into the dishwasher?
- How does the material of your plates or bowls deal with stains?
- Would you like to brand them?

BUCKET INVENTORY

Another important thing to consider is how many sealable food grade commercial buckets you will need on hand. This largely depends on the types of plates you plan to use, and how many plates will fit into each bucket. Below is a breakdown of how many of each item can fit into one of our food grade commercial buckets.

Item	Items/Bucket
Oval Bowls	25
18 oz. Bowls	30
8.5" Plates	60
11" Plates	50
Forks	350
Spoons	350

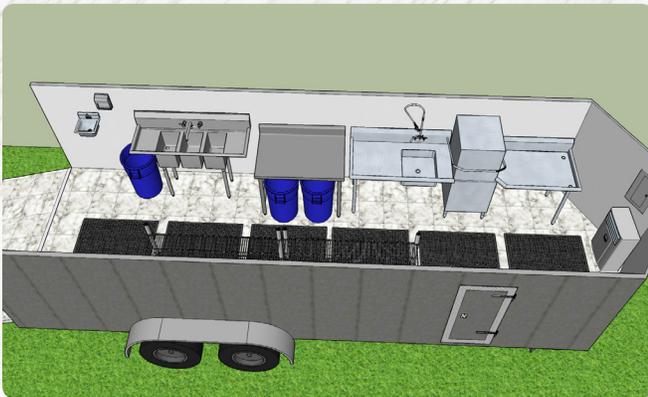


4. Establish a Washing Method

In the initial year of the program, we partnered with a local restaurant, The Stone Cup, and began washing our reusables in their restaurant dishwashing space after hours. Then, we would pack the clean plates into sealable, food safe buckets and cart them back to the food vendors. Although this was a good way to ease into a reusables program, it presented some challenges: because we had to cart dishes back and forth, we experienced significant plate loss and breakage, and the process was too slow to keep up with demand, which left us having to resort to using backup single-use compostables. But it was clear that people were receptive to the program and that on-site temporary facilities were the next step to improving the existing program.

The following year, we constructed a full-service dishwashing trailer, built to meet and exceed health department requirements. We built hookups at our location to feed the trailer with high water pressure, and built a grey water drain to ensure that the trailer could continue to operate at permanent facility standards in a temporary facility setting.

Here are the 3D renderings we made when designing the trailer:



Using this 3D model, we were able to create the following inventory list of equipment to be installed:

- Performance Platinum 9.5 GPM Liquid Propane Gas High Efficiency Outdoor Tankless Water Heater Model # ECOH200XLP-1
- 3 basin sink
- CMA EAH-2 Commercial Low Temp Dishwasher
- Water Worker 32 Gallon Pressurized Well Tank
- Scrape table
- Drain pans for CMA dishwasher with rinse sink
- 2 drying racks
- Handwashing sink
- LG Electronics air conditioner

Here are the images of the final completed trailer:



As a result of building our own trailer, we were able to reduce inventory loss from 31% in 2016 to 13% at RockyGrass, and then down to 5% at Folks Festival in 2017. In addition, Folks Festival 2017 was the first event in which we were able to rely solely on reusable plates - no compostable plates were used.

Whether you are choosing to partner with a local business to wash your dishes off-site or building your own dishwashing trailer, remember that you need to meet restaurant standards for cleanliness, water temperature and pressure, sanitation, drying methods, and grey water waste disposal, as well as sealable food safe containers to transport your clean dishes back to your food vendors. These containers need to be washed and sanitized, just like your plates.

IMPLEMENTING A PROCESS

Here is a breakdown of how our process works from beginning to end:

1. Distributing

For our Reusable Plate Program, we wanted to keep things as simple as possible for our Festivarians—we didn't want them to have to go through a separate process to get their own plate and/or utensils. So, when you order food from one of our vendors, they serve it up right on the reusable plate and give you whatever reusable utensils you need, free of charge.

2. Collecting

Once the Festivarian has finished eating, they return the plate and utensils to one of our custom-designed waste stations, which include a separate compartment especially for reusable plates and utensils. The Lyons High School Band volunteers collect plates from each waste station and take them to the dishwashing trailer (or if it's busy, to a table right outside of the trailer, where plates wait in line to be washed.)

3. Washing

Volunteers help to get the dishes washed, rinsed, sanitized, and air-dried (you may also expedite drying with a paper towel, but not cloth towels.) Once the dishes are clean and dry, volunteers stack the clean dishes (by type) into clean, sealable food grade buckets, which can either 1) go into storage or 2) be redistributed to food vendors, depending on demand. We have found that, to keep up with our demand, we must hire an overnight dishwashing crew for each night of the festival, so that the following morning, we're starting fresh, and no reusables sit with food on them for too long.

4. Storing

For storage, we use commercial food grade buckets with sealable lids sourced from Uline. In the off-season, all plates are stored inside the closed trailer in their sealed buckets. During the events, we built an enclosed 10x10 tent, and stored the buckets inside the tent on raised pallets to keep them off the ground.

5. Tracking

To track our plate usage, we needed to come up with a system that accurately tracked how many plates we feed through our system. Not only does it allow us to figure out how many plates we diverted from the waste stream, but also how to improve our inventory for future years. We discovered that tracking the full buckets we deliver to vendors was the easiest way to efficiently track demand. To accomplish this, we made sure that each bucket was reloaded with the same number of plates each time. Tracking who needs which type and when, allowed us to continuously update our inventory to meet that demand.

6. Having a Plan B

It is vital to have a backup stock of single-use compostables. We partner with Eco-Products to ensure that if something goes awry, we will still be prepared to stock our food vendors with plates and/or utensils.

BUILDING A TRIBE

Arguably the most important part of starting this landmark program is gaining the support of your event attendees, food vendors, volunteers, and local community. Simplify the process as much as possible and keep the messaging consistent and easy to understand. It is vital that we tell our story in a way that is inspiring, gains support, and ultimately, builds a tribe who is not only willing but excited to join us on the journey as we try something new.



When we first introduced this program, we had issues with plate loss, some of which we realized was from Festivarians taking the plates home with them. Even though this scenario was not ideal, as we were losing money from inventory loss, it was encouraging in a way: our Festivarians thought these plates were cool. They were adding value to their experience. So, all we had to do was acknowledge that sentiment, remind them of the big picture, and reconnect them to the “Festivarian Nation” that was relying on them to do their part. We messaged through on-site signage (at food vendors, near exits, at waste stations), announcements from the Festival Main Stage, and articles in the printed program.

Here is an excerpt from one of our printed programs, as an example:

This program is a collective effort; it absolutely cannot succeed without your help. Please remember to return all plates and utensils to the proper bin, never take plates or utensils outside the festival grounds, and remind your fellow Festivarians to do the same! This program is the only one of its kind, as it is completely free to all Festivarians. Let's work together to make sure it can stay that way! Years from now, future Festivarians (& Earthlings!) will thank you.

We are very lucky to have amazing, adventurous food vendors that we have long-term relationships with. Many of them try to outdo themselves in “Sustainable Festivation” year-after-year, and we incentivize them by offering a “Green Spoon” award to the most innovative and sustainable food vendor at each Festival. We consulted with our food vendors early-on to be sure we would meet their needs with this program, and we offered the program to them for free for the first two years while we got our processes streamlined. Even now, with the introduction of a small fee to help pay for the program, they are walking away with more profit from our events because they no longer have to pay for their own single-use compostable plates and utensils.

This program is a long-term investment. Financially, it is no small undertaking, but you will get a return on your investment that is much bigger than a bottom line. From a Marketing & Public Relations perspective, beginning a program such as this one in your own community is *huge*. You will be a company on the front lines of sustainability, waste reduction, and reuse.

THE IMPORTANCE OF REUSE AT LARGE EVENTS



The reusable plate program that's being demonstrated at Planet Bluegrass is another example of innovative and increasingly successful Zero Waste efforts at festivals, sport arenas, and other large events. Venues and events like these typically generate more trash per person than at other places and times, often inundating sites and surrounding communities with litter if not managed properly. These challenges present the opportunities for clean, green events that are increasingly expected by host communities, fans, performers, and sponsors.

Although reuse is a preferred environmental option, it can sometimes be harder and more costly than handling tons of compost or recyclables. With their reusable plate program, Planet Bluegrass combines benefits like cost improvements, environmental savings, and an enhanced dining experience into a practical action. This guide is a great resource that will benefit community groups, event organizers, vendors, eco-entrepreneurs, and others who are ready to take the next step towards Zero Waste.

—Jack DeBell, CU Recycling Program Development Director

ADDITIONAL RESOURCES

Boulder County Resource Conservation Division
www.BoulderCountyRecycles.org

Colorado Department of Public Health and Environment
www.colorado.gov/cdphe

Colorado Association for Recycling
www.cafr.org

Eco-Products
www.EcoProducts.com

Bamboo Studio, Inc.
www.ecobambooware.com

Pickathon's Plate Program
<https://pickathon.com/info/commitment-to-sustainability/>



**Check out our Reusable Plate Program
video at Bluegrass.com/RPPVideo!**

? STILL HAVE QUESTIONS? We're happy to help! Send us an email at green@bluegrass.com.

DISHWASHING TRAILER EXPENSES ADDENDUM

Trailer (24' x 8' Used) -----	-\$5,500.00
Trailer Jacks -----	-\$201.13
Contractor Materials -----	-\$992.72
Contractor Labor -----	\$6,245.00
Dishwasher -----	\$3,566.74
Dish Racks -----	-\$294.49
Mats & 3-Basin Sink -----	-\$120.00
Other Dishwashing Accessories -----	-\$391.48
Other Restaurant Supply Store Expenses -----	-\$933.95
Tankless Water Heater -----	-\$1,278.71
Total -----	-\$19,524.22

Note: We purchased most of our equipment used, from restaurant supply stores. This helped us greatly reduce the overall cost of building our dishwashing trailer.