



**Earth Matter NY**

**Compostable Serviceware Buyers' Co-op Guide**



[www.EarthMatter.org](http://www.EarthMatter.org)



This booklet was created to give fellow composting enthusiasts information and insight on how to start and operate a compostable serviceware buyers' cooperative, including best management practices, and some lessons we learned while forming our buyer' co-op. We hope you enjoy it and welcome your feedback at [zerowaste@earthmatter.org](mailto:zerowaste@earthmatter.org).

Zero Waste Island Team  
Fall 2020

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*Any opinions, findings, and/or interpretations of data contained herein are the responsibility of the author(s) and do not necessarily represent the opinions, interpretations or policy of Rochester Institute of Technology and its NYS Pollution Prevention Institute or the State.*

# Introduction

## Earth Matter NY

Founded in 2009, Earth Matter NY's mission is to reduce the organic waste misdirected into the garbage stream by encouraging neighbor participation and leadership in composting. We address the dual issues of resource recovery and building healthy soils with a single solution: promoting the local processing of organic waste into fertile compost. We are passionate about resource recovery and healthy soils as primary goals of a 21st century urban environment.

Earth Matter's home base is Governors Island. This 172-acre oasis in New York Harbor, in use by the US Coast Guard until 1996 and opened to the public in 2005, lies just 800 yards from Lower Manhattan and 400 yards from Brooklyn. Open to the public from May until October for recreational, cultural, and educational activities, Governors Island now attracts 800,000 visitors annually, has 15-20 food vendors, and hosts huge events with up to 10,000 attendees.

Earth Matter welcomes 15,000 visitors and volunteers annually, with a wide range of social, educational, and cultural offerings, from composting demonstrations at The Compost Learning Center, to hands-on activities at Soil Start Farm (including animal care with our chickens, goats, and worms), to yoga classes at The Lavender Field, and supporting "zero waste" events.

Earth Matter is now New York City's third-largest composting operation, processing more than 1,340,000 pounds of organic material from the Island and New York City residents annually into fertile compost used on the Island and across the City.



## Zero Waste Island Initiative

The Zero Waste Island Initiative (ZWI) is a partnership between The Trust for Governors Island and Earth Matter NY aimed at reducing Governors Island’s waste export to zero.



The Trust is a nonprofit organization formed by New York City to manage the development of 150 acres of the Island (the remaining 22 acres includes Governors Island National Monument and is managed by the National Park Service).

“Zero waste” is an ideal, a goal that is ethical, economical, efficient, and forward-thinking. It is a simple phrase that can guide people to change their lifestyle and adopt sustainable practices where all materials are not simply discarded but recycled and used as a resource in another form. With this in mind, ZWI aims to manage materials in a circular fashion whenever possible.

One big step in reducing the amount of waste needing to be carted off the island has been to make more of it compostable so that it can be efficiently processed by Earth Matter, right on the island.

All vendors and tenants operating on the island are mandated to use only compostable serviceware, reduce their waste as much as possible, and source from sustainable resources. Earth Matter NY is the composter, and processes all organics collected on the island as well as providing educational resources and consultations to the Trust for Governors Island and all island partners.



In 2020, with the support and funding provided by NYSP21 (the Pollution Prevention Institute of New York State Department of Environmental Conservation’s Environmental

**THE TRUST FOR**  
**GOVERNORS ISLAND**

Protection Fund), Earth Matter added an additional resource for the Initiative by creating and operating the Compostable Serviceware Supply, right on the Island.

# Waste Management on Governors Island

The Trust for Governors Island's operations staff manages all waste collection on the island. Earth Matter NY relies on them to bring the compostable material to us to process.

To ensure that the system functions well, the following procedures, in accordance with NYC recycling laws, have been implemented:

- Each waste stream has a different color:
  - Green = Compost
  - Clear = Recycling
  - Black = Landfill
- Waste streams should never commingle at any point in the process, from set-out to delivery to Earth Matter.
- All Island operations staff receive ZWI training annually, including a class on recycling and composting, and a tour of Compost Learning Center.
- Maintain a communication, check-in, and reporting system among all parties involved (composter, maintenance staff, administration).



# Earth Matter Compostable Serviceware Supply



When Governors Island first began requiring food vendors to use compostable serviceware, many were struggling to comply. Some of the issues facing them were high prices, accessibility, storage, and confusing labeling.

On Earth Matter's side, issues included high contamination rates, and too many products to verify as BPI-certified\*. We were also concerned about use of products that contain PFAS ingredients (see below).

To address these issues, Earth Matter created a system to make obtaining compostable serviceware easier, more efficient, and affordable for the Island's vendors, tenants, and event producers to meet zero waste goals.

One ZWI objective is to foster the Island community's knowledgeability about and commitment to our shared sustainability goals.

To achieve this, we:

- Make bulk purchases of compostable serviceware to keep costs low, listening to vendors' needs.
- Store the inventory on the island, so serviceware is readily available to buyers.
- Continually train food vendors and event producers on the use, storage, and disposal of compostable serviceware.

In doing so, we reduce the amount of plastic waste headed to landfills (mitigating the climate impact of methane emissions from said landfills), and reduce the waste generated by transport.



## Concept

### Why use and advocate for compostable serviceware?

Although many plastics are recyclable, only about 9% are actually recycled<sup>1</sup>. When it comes to disposable cutlery, the numbers get worse, as forks and knives are often rejected by recycling facilities due to their small size. The recycling of plastics is a long process and actually considered downcycling, whereas composting is upcycling, as it creates something of use and renewed value.

The use of compostable serviceware in the food service industry reduces contamination in the compost stream, increasing efficiency greatly. Our Zero Waste Island team inspects all bags of compostables coming to our site. Contamination rates and time for sorting have dramatically decreased because of the use of compostable serviceware by all Island partners.

Utilizing compostable serviceware as a tool to reach zero waste goals is making the switch from a linear economy to a circular economy. It is important to switch from introducing and using materials destined for landfill and use materials that can be reused or turned into a new resource.



### The challenges of compostable serviceware:

- A compost processor (such as Earth Matter) needs to be in place before using compostable serviceware. Your composter must accept compostable serviceware that you offer in your co-op.
- Using so-called compostable plastics is especially hard because very few composters currently accept them.
- Many composters are worried about contamination in post-consumer compost collection, and might not accept your materials for composting.
- Post-consumer compost collection needs to be in place before using compostable serviceware.

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<sup>1</sup> Woldemar d'Ambrieres (2019) "Plastics recycling worldwide: current overview and desirable changes"

- Compostable serviceware is a relatively new thing: some consumers do not realize that the serviceware is compostable.
- Many people do not know about composting or that contamination is a big problem.
- Not as readily available for purchase as plastic serviceware.
- More expensive than plastic serviceware.
- Many products have misleading labels that suggest they are compostable.
- Compostable plastics have a shelf life and are sensitive to direct sun and heat.

	Advantages of Centralized Supply	Challenges of Centralized Supply
<b>Co-op Partners</b>	<ul style="list-style-type: none"> <li>• Readily available</li> <li>• Reduced price for products</li> <li>• Assurance of products being accepted by composter</li> <li>• Don't have to be worried about storage</li> </ul>	<ul style="list-style-type: none"> <li>• Partners and supply operator relations</li> <li>• Supply operator not carrying products you want</li> </ul>
<b>Composter</b>	<ul style="list-style-type: none"> <li>• Less contamination</li> <li>• Unified products make it easier to identify compostable serviceware in sorting process which reduce labor and time for sorting materials</li> <li>• Assurance of compostability</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Buyers' Cooperative</b>	<ul style="list-style-type: none"> <li>• Income revenue stream</li> <li>• Be the one to make compostable serviceware more widespread to head towards a more sustainable future</li> <li>• Gatekeeper and mediator between composter and partners</li> </ul>	<ul style="list-style-type: none"> <li>• Storage space with environmental controls</li> <li>• Managing supply and demand</li> <li>• Up-front cost of purchasing products</li> <li>• Ordering enough to qualify for bulk pricing</li> </ul>



# Starting Your Own Compostable Serviceware Co-Op

Here are some steps you can take to establish your own compostable serviceware co-op, along with insights on how Earth Matter's Zero Waste team handled things.

- 1. Identify a composter and determine what they accept. Develop a plan with your buyers and composter(s) to assist buyers in finding a place for their compostables to be composted.**



In our case, we are the composter, so know what we can and cannot compost. We are hypervigilant about choosing products that do not contain PFAS and will actually break down in the composting process.

- 2. Assess the need and support for compostable serviceware.**

- Are your potential buyers using non-compostable products?
- Do you have enough buy-in to be able to buy in bulk and have a lower price point to make this endeavor worthwhile for co-op members?
- Are your potential buyers permanent, seasonal, temporary, or event hosts?
- Are you servicing several buyers in the same area, or are they dispersed?

The vendors, event producers, and tenants on Governors Island (most of which are seasonal) use a lot of disposable serviceware. However, when vendors chose their own "compostables," much of it was actually not compostable, and ended up contaminating the organics stream. We listened to and surveyed our partners to fully understand their needs.



- 3. Get commitment from all aspects of management, and find a lead that you can reliably coordinate with.**



We are in regular communication with our ZWI partners to ensure that we are on track to meet our zero waste goals and things are running smoothly. We work with operations staff, vendors, and other Island tenants; The Trust for Governors Island has advanced our efforts by banning plastic bags, bottles, and straws, and incorporating zero waste stipulations into their vendor contracts.

**4. Educate potential buyers about compostable serviceware and confirm commitment.**

We stressed to potential partners/buyers the importance of using compostable serviceware instead of plastics, and how they can help reduce waste by being mindful of ZWI goals in their daily operations (i.e. offering lids or straws only when needed).



**5. Determine your legal operating structure. In some states you will need a resale license for your operations.**



We were required to obtain a NYS resale certificate from the New York State Department of Taxation and Finance, and report sales tax collected annually.

**6. Identify proper storage for your inventory. The storage needs to be clean, climate controlled, accessible, and local.**

We identified a climate-controlled (indoor) space on the Island to store inventory, reducing order turnaround time and transportation costs.



**7. Identify a potential compostable service supplier (or suppliers). Here are some things to watch out for:**

- “Compostable” vs. “Biodegradable” vs “Oxo-biodegradable”
  - All three terms refer to the end-of-life of a material, but they are not interchangeable. See the infographic on Resources page.
- Products that contain “PFAS”:
  - Per- and polyfluoroalkyl substances (PFAS) which includes PFOA and PFOS are chemicals that are harmful to humans and the environment. They are often found in products that are non-stick, water-resistant, and oil-resistant (which is why some single-use serviceware contains them). They are also known as “forever chemicals” because they accumulate (in the environment and in your body) and do not break down (fda.gov).

- BPI Certification:
  - BPI is a science-driven organization that supports a shift to the circular economy by promoting the production, use, and appropriate end of lives for materials and products that are designed to fully biodegrade in specific biologically active environments.



We researched compostable serviceware suppliers that would sell and deliver to us here in New York City, making a chart with all the determining factors (items they carried, BPI certification, discounts for bulk orders, shipping fees) so we could compare vendors side-by-side.

#### 8. Determine which products you will carry.

- What is a manageable array of products to offer to your buyers? You have to provide enough variety but not too many that you have to store so many different items.
- Availability of products and price point for the buyer.
- Are they locally manufactured products?
- Are they sustainably produced?

We used ZWI partner survey results to determine what to carry, selecting products that our partners committed to ordering large quantities of. We are able to stock a few specialty items as well, if they are ordered along with our bulk order(s).



#### 9. Compare prices and determine which vendor (or vendors) is right for you.



After comparing prices and other considerations for the range of products our partners requested, we found that ordering from just one distributor with a large selection of serviceware items instead of dealing with multiple vendors was best for us, even though some items were cheaper elsewhere.

#### 10. Determine accounting, distribution, communication, staffing systems.

- How to collect and process payments, and how often?
- How to deliver to buyers, and how often?



We make deliveries twice a week, which fits our staffing schedule and meets our partners' needs. We charge for every sale upon delivery. Delivery is via tricycle, minimizing our carbon footprint.

## Maintaining and Troubleshooting

- Constant communication with management, buyers, and composters is crucial.
- Keep extremely detailed records of your inventory, purchases, and sales. This will help you with running a smooth operation now and make it easier to order what is necessary in future orders.
- Regularly educate those involved on the importance of compostable serviceware to all involved parties. Create informative flyers for their reference.
- When you run out of an item, do you make a smaller purchase? Weigh the cost of ordering smaller amounts plus shipping fees versus potentially losing a partner.
- Keep partners happy! Remember that their business is as important as your business. Always work with them to find solutions that work for both parties.

## Final Thoughts

- Pay attention to and celebrate small successes! Even small changes indicate progress toward your goals.
- Each program must be tailored to the unique needs of the community or institution it intends to serve.
- Clear communication between partners is key to ensuring cooperative problem-solving and everyone taking responsibility and getting recognition for the success of the project.

# Resources

## Compostable Serviceware Vendors

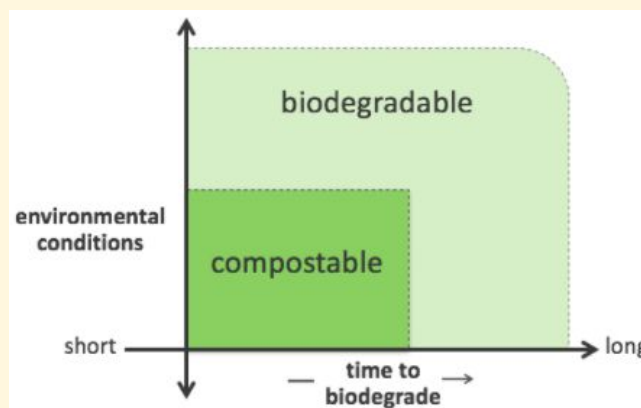
Company	Website
Asean/Stalk Market	<a href="http://stalkmarketproducts.com">stalkmarketproducts.com</a>
Berk Enterprises	<a href="http://berkbrands.com">berkbrands.com</a>
Better Earth	<a href="http://becompostable.com">becompostable.com</a>
Dart Container/Solo Cup	<a href="http://dartcontainer.com">dartcontainer.com</a>
ECO Products	<a href="http://ecoproductsstore.com">ecoproductsstore.com</a>
Emerald	<a href="http://emeraldbrand.com">emeraldbrand.com</a>
Green Paper Products	<a href="http://GreenPaperProducts.com">GreenPaperProducts.com</a>
Greenware by Fabri Kal	<a href="http://fabri-kal.com">fabri-kal.com</a>
PrimeWare	<a href="http://primewareproducts.com">primewareproducts.com</a>
Sabert	<a href="http://Sabert.com">Sabert.com</a>
Vegware	<a href="http://Vegwareus.com">Vegwareus.com</a>
World Centric	<a href="http://Worldcentric.com">Worldcentric.com</a>

# Infographics



Compostable	Biodegradable	Oxobiodegradable
<ul style="list-style-type: none"> <li>Breaks down into biomass, carbon dioxide, and water at a rate similar to other organic matter in a composting system</li> </ul>	<ul style="list-style-type: none"> <li>Breaks down into biomass, carbon dioxide and water through the action of microorganisms, bacteria and fungi</li> </ul>	<ul style="list-style-type: none"> <li>Breaks down into smaller pieces due to heavy metals or other catalysts</li> </ul>
<ul style="list-style-type: none"> <li>Breaks down within 180 days in a commercial composting facility (may take longer in a home composting system)</li> </ul>	<ul style="list-style-type: none"> <li>May take a long time to break down and depends on the disposal environment</li> </ul>	<ul style="list-style-type: none"> <li>May take a long time to break down and may never completely biodegrade</li> </ul>
<ul style="list-style-type: none"> <li>Leaves no visible or toxic residue</li> </ul>	<ul style="list-style-type: none"> <li>May leave toxins or residue if toxic ingredients do not break down</li> </ul>	<ul style="list-style-type: none"> <li>Leaves heavy metals or other toxins in the soil and environment</li> </ul>

Source: [WorldCentric.com](http://WorldCentric.com)



Source: [sustainablepackaging.org](http://sustainablepackaging.org)



## COMPOSTABLE SERVICEWARE COMPLIANCE EVALUATION GRADING RUBRIC **TEMPLATE 2020**

Planning & Communication	Excellent-3	Satisfactory-1.5	Poor-0	
Timeliness on making orders (responsiveness, proactivity)				
Communication & planning on receiving orders (responsiveness, proactivity)				
Attitude (receptiveness to feedback, general working experience)				
<b>SECTION TOTAL</b>				<b>___ points</b>

Compliance with Zero Waste Requirements	A-3	B-2	C-1	D-0									
<b>Certified Compostable products usage</b>													
<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>100%</td> <td>91% - 99%</td> <td>76% - 90%</td> <td>&lt;75%</td> </tr> </tbody> </table>	A	B	C	D	100%	91% - 99%	76% - 90%	<75%					
A	B	C	D										
100%	91% - 99%	76% - 90%	<75%										
<b>Efforts on minimizing waste</b>													
<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>Great</td> <td>Good</td> <td>Acceptable</td> <td>No effort</td> </tr> </tbody> </table>	A	B	C	D	Great	Good	Acceptable	No effort					
A	B	C	D										
Great	Good	Acceptable	No effort										
<b>SECTION TOTAL</b>					<b>___ points</b>								
<b>ALL SECTIONS TOTAL</b>					<b>___ points</b>								

### CONVERTING EVENT SCORE INTO A COMPOSTABLE SERVICEWARE COMPLIANCE GRADE

- 15 - 13 POINTS= **A**
- 12 - 9 POINTS= **B**
- 8 - 5 POINTS= **C**
- 4 - 0 POINTS= **D**

RUBRIC SCORE	TEMPLATE ZERO WASTE EVENT GRADE
<b>___ POINTS</b>	

*The rubric is designed to evaluate the rate of compliance and effectiveness of our project.*

# Signs

## American Compostable Certification



Sign used at sorting stations during special events, this sign guides event goers on what to put in the orange bin.



Banner on our trikes that we use for transporting supplies and food scraps.



Banner on display at Earth Matter's Compost Learning Center.