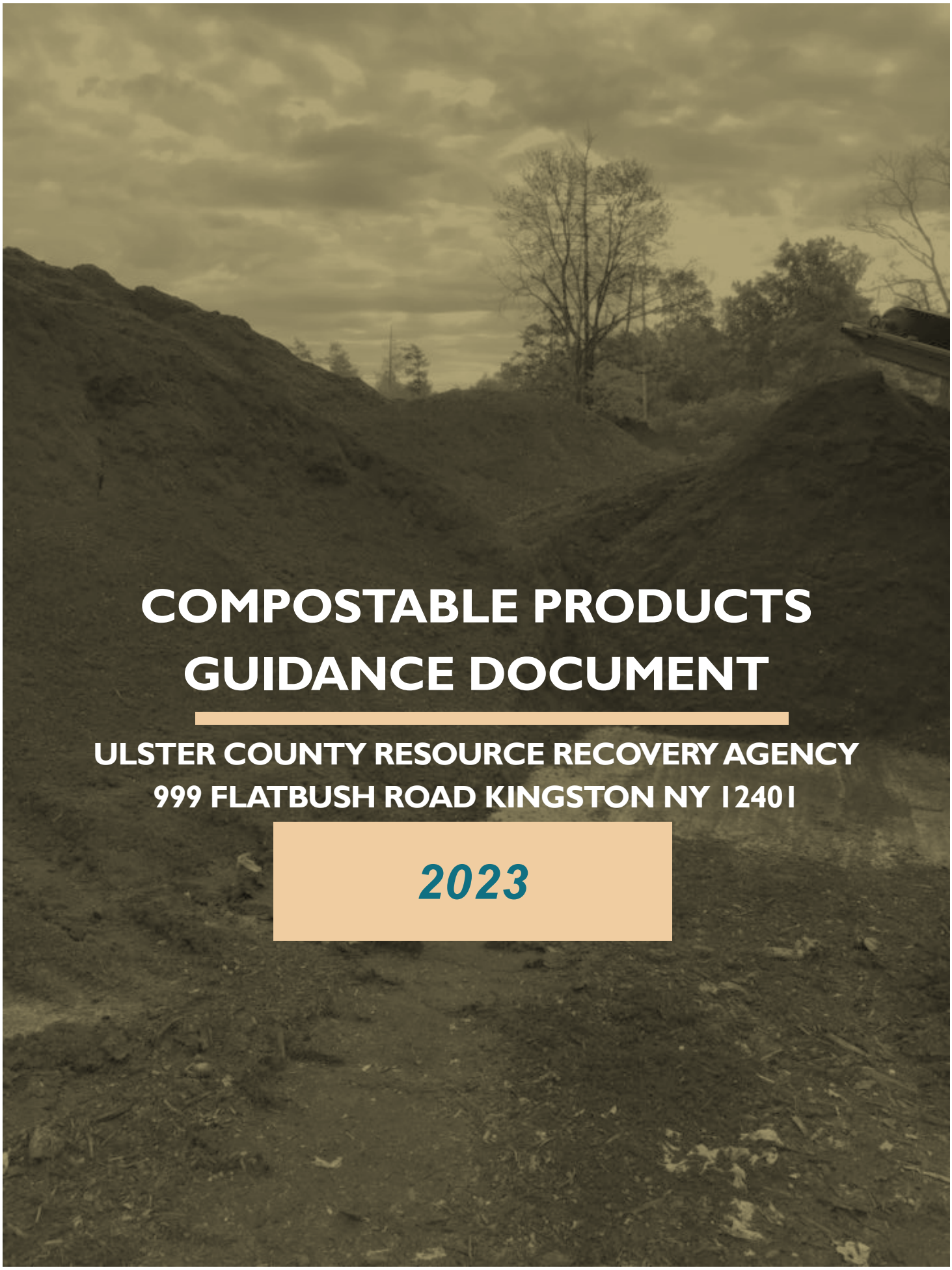


COMPOSTABLE PRODUCTS GUIDANCE DOCUMENT

ULSTER COUNTY RESOURCE RECOVERY AGENCY
999 FLATBUSH ROAD KINGSTON NY 12401

2023

UCRRA Compostable Products Guide

INTRODUCTION

This guidance document serves as an official memo to our Partners in Composting Program, to help your team understand our policy on compostable packaging, and to raise awareness of the emerging issues around their efficacy and sustainability.

Every year, the Ulster County Resource Recovery Agency's Organics Recovery Facility turns thousands of tons of organic materials into nutrient-rich compost that is sold to farmers, landscapers, and home gardeners. Our *STA certified* compost product aids in improving soil health and creating more resilient soils systems, and we strive to make the highest quality compost possible. We achieve this by using industry best practices and excelling at environmental compliance standards, which we could not do without the support of our Partners in Composting.

Compostable packaging has become increasingly popular as it is often believed to be a more sustainable choice for replacing other single use disposable service ware items. There is little regulatory oversight over how products are labeled, and consumers are very confused about which products to choose, and which products will perform in the ways they are intended to, which has serious negative impacts on the efficiency of composting operations. Furthermore, the organics recycling industry has increasingly become aware of other concerns about some of these products, found to contain the toxic forever-chemical PFAS. Many leaders in our industry are working to phase out these products completely or otherwise implement more scrutiny over which products are allowed in compost operations.

The Agency recognizes the role that compostable products can play in achieving zero waste goals, and we recognize the public's desire to continue to use compostable products. We are committed to finding a way to balance the benefits they might offer as a single use plastic alternative with the realities and limitations of their recycling efficacy. Our compostable products acceptance policy will continue to evolve to coincide with the best knowledge available to maintain our professional expertise and serve the public with our shared goals for organics recovery. Should you have any questions regarding the content of this memo, please feel free to reach me directly.

Sincerely,

Angelina Brandt, Director of Sustainability

Ulster County Resource Recovery Agency

CC: Greg Ollivier, Executive Director & Charles Whittaker, Director of Operations and Compliance

1. EXECUTIVE SUMMARY

- **Any use of compostable packaging must be expressly approved by the Agency in writing to ensure that**
    - **(1) the approved items conform to our standards expressed below,**
    - **(2) the approved items can be functionally processed in the *quantities and *frequency that a partner may be delivering the items, and**
    - **(3) an adequate educational effort is in place for purchasing and source separating organics to reduce contamination.**
- **Bioplastics, or bio-resins or biopolymers, commonly used for cold cups, utensils, straws, or other rigid bio-based forms will NOT be acceptable, except for certified compostable bin liners (whose approved use is restricted to commercial partners only).**
- **Fiber/paper products, such as fiber-based plates, bowls, trays, hot cups, straws, or other molded forms will be acceptable ONLY when the product is certified by the Biodegradable Products Institute (BPI) with ASTM D6868 standard and generated by commercial partners only.**
- **Residential composting programs may NOT include any compostable products, as there is no feasible way to monitor for the correct items or have oversight over which products residents may be using.**
- **Acceptable items must be current in the Biodegradable Products Institute (BPI) online database *www.products.bpiworld.org* with ASTM D6400 and D6868 specifications.**

Please be advised that the Agency is striving to produce the highest quality compost possible which is why we are phasing out all service ware packaging that has become problematic to the efficacy of our program. Thank you for your attention and for sharing our commitment to these high standards for environmental sustainability. Your cooperation is essential to support our program. Please contact the Agency's Director of Sustainability at 845-336-0600 or email APEO@UCRRA.ORG should you have any questions about this memo.

2. COMPOSTABLE PRODUCTS…FACT OR FICTION?

MYTH	*TRUTH*
Packaging labeled 'plant-based' 'eco-friendly' or 'biodegradable are compostable in industrial facilities	**There is little regulatory oversight over the use of branding or marketing claims as "biodegradable" "plant-based" "eco-friendly" and "compostable." However, a certified compostable product has been scientifically tested for biodegradation (conversion of organic carbon to CO2), and disintegration (physical break down), and undergoes a technical analysis for heavy metals, and other laboratory tests to confirm no adverse impacts on the ability of compost to support plant growth.**
Compostable products break down completely in industrial composting facilities	**Even certified compostable products are tested in a laboratory setting, and don't always replicate 'real-world' applications. Some compostable products can take up to 190 days to fully degrade, whereas our active composting process is only 30 days. Many compostable products are heat resistant up to 200 degrees, whereas active composting temperatures typically reach 150-160 degrees. The higher temperatures that would be effective to break down these products would be too detrimental to the biology of the composting process. Partial degradation can result in packaging fragments ending up in the finished product which can't be further removed through mechanical screening.**
Compostable products are a better choice and are good for the environment	**Durable, reusable items are always better than disposable items! Compostable products may require more fossil fuel energy use, release more greenhouse gases, or result in more toxicity than their non-compostable counterparts (Oregon DEQ).** **Handling packaging causes inefficiencies in our composting process, which also uses more energy and resources.** **Packaging designed for water and grease resistance may contain chemicals that can transfer into finished compost. BPI certification ensures no added chemicals are in their products.**

3. FREQUENTLY ASKED QUESTIONS

What is the Biodegradable Products Institute (BPI)?
The BPI is a non-profit association with the largest certification program for compostable products and packaging in North America. [The BPI] logo verifies that products and packaging have been independently tested and verified according to scientifically based standards. Compostable products certified by BPI hold the American Society for Testing and Materials (ASTM) technical standard based on pass/fail criteria for compostability using test methods and third party verification.

What are ASTM specifications?
ASTM D6400 *covers labeling of polymers and finished products designed to be composted in industrial facilities.* ***ASTM D6868*** *covers labeling of finished products that incorporate polymers as coatings or additives with paper, fiber, or other substrates designed to be composted in industrial facilities. BPI uses 6868 for uncoated paper, fiber, multi-layer flexible packaging, coffee pods, etc.*

Why did BPI expire licensing on certain products?
Concerns around toxicity of fluorinated chemicals led BPI to change its certification program to eliminate fluorinated chemicals. BPI certified products not meeting the new requirements will be phased out by the end of 2019. Learn more at https://bpiworld.org/Fluorinated-Chemicals

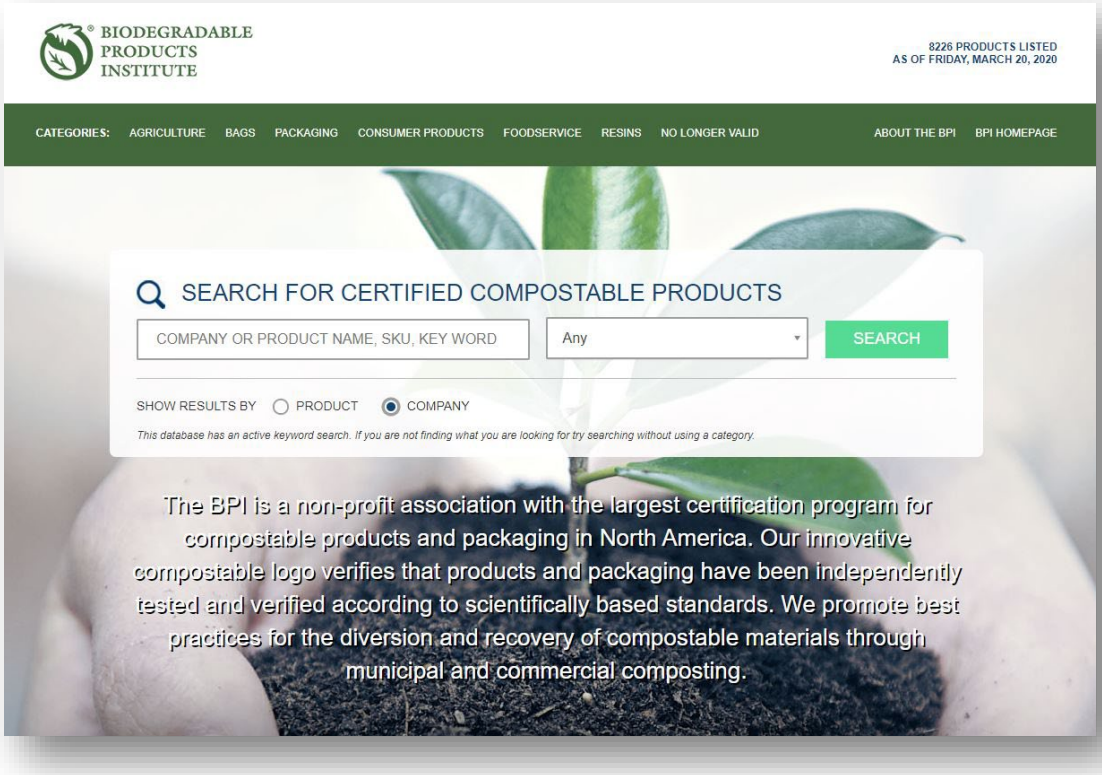
How can I comply with these changes?
If foodservice ware compostable products are currently included in your food scraps collection program, please contact the Agency Director of Sustainability to discuss your plan to phase out or discontinue any non-approved packaging.

What would happen if unacceptable items are brought to UCRRA?
Please note that all loads of food scraps are inspected as they are received by the Agency. You can expect ongoing feedback about the quality or contamination of your loads. If unacceptable items are identified in the load, you will be charged a contamination fee, which will be the current solid waste tipping fee.

We encourage you to share or forward this memo with the entire team involved in your composting program! Guidance for searching for accepted items on the BPI website is provided on the following pages.

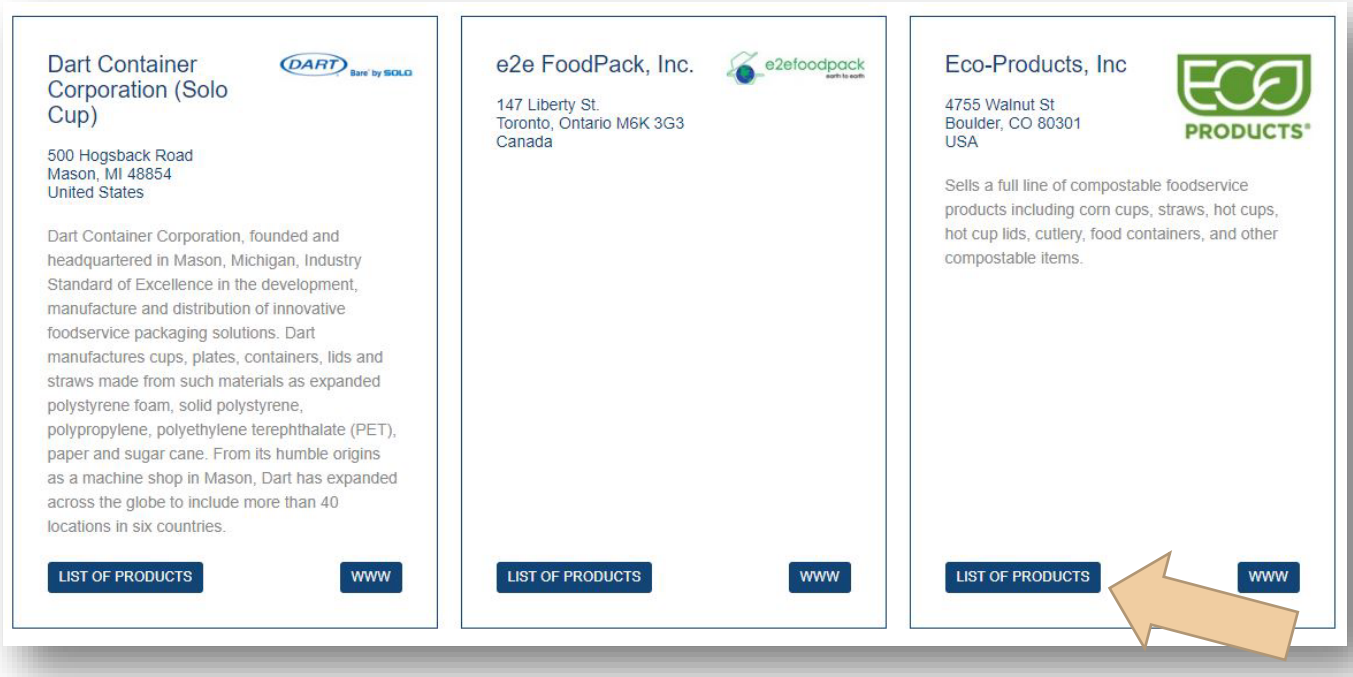
4. USING THE BPI WEBSITE

*Visit **www.products.bpiworld.org** for a searchable database of thousands of certified compostable products. If you're searching for a specific company or product name, try using the search bar feature to type in the product name or browse based on the specific type o packaging.*



If you're browsing to look at all options, you may also scroll down and use the Products Category feature

Click on LIST OF PRODUCTS to view the certified products manufactured by that company.



Dart Container Corporation (Solo Cup)

500 Hogsback Road
Mason, MI 48854
United States

Dart Container Corporation, founded and headquartered in Mason, Michigan, Industry Standard of Excellence in the development, manufacture and distribution of innovative foodservice packaging solutions. Dart manufactures cups, plates, containers, lids and straws made from such materials as expanded polystyrene foam, solid polystyrene, polypropylene, polyethylene terephthalate (PET), paper and sugar cane. From its humble origins as a machine shop in Mason, Dart has expanded across the globe to include more than 40 locations in six countries.

LIST OF PRODUCTS WWW

e2e FoodPack, Inc.

147 Liberty St.
Toronto, Ontario M6K 3G3
Canada

LIST OF PRODUCTS WWW

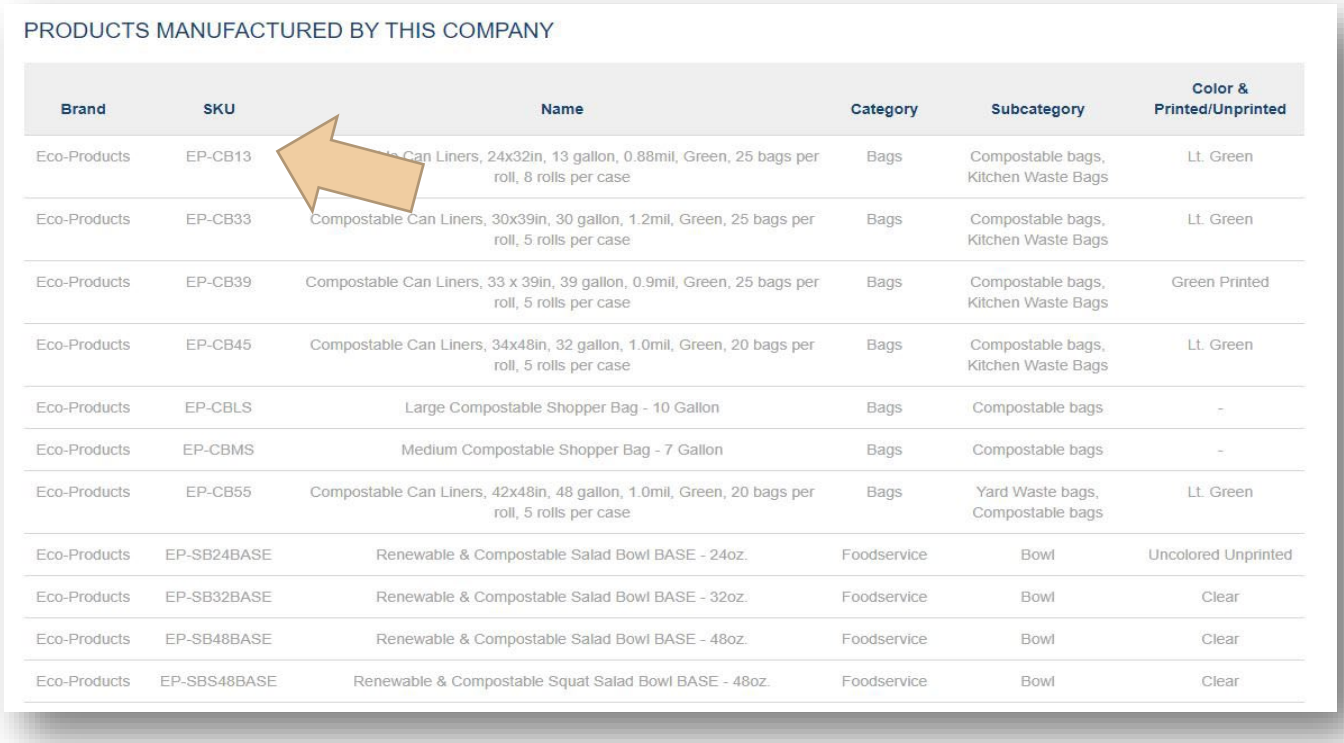
Eco-Products, Inc

4755 Walnut St
Boulder, CO 80301
USA

Sells a full line of compostable foodservice products including corn cups, straws, hot cups, hot cup lids, cutlery, food containers, and other compostable items.

LIST OF PRODUCTS WWW

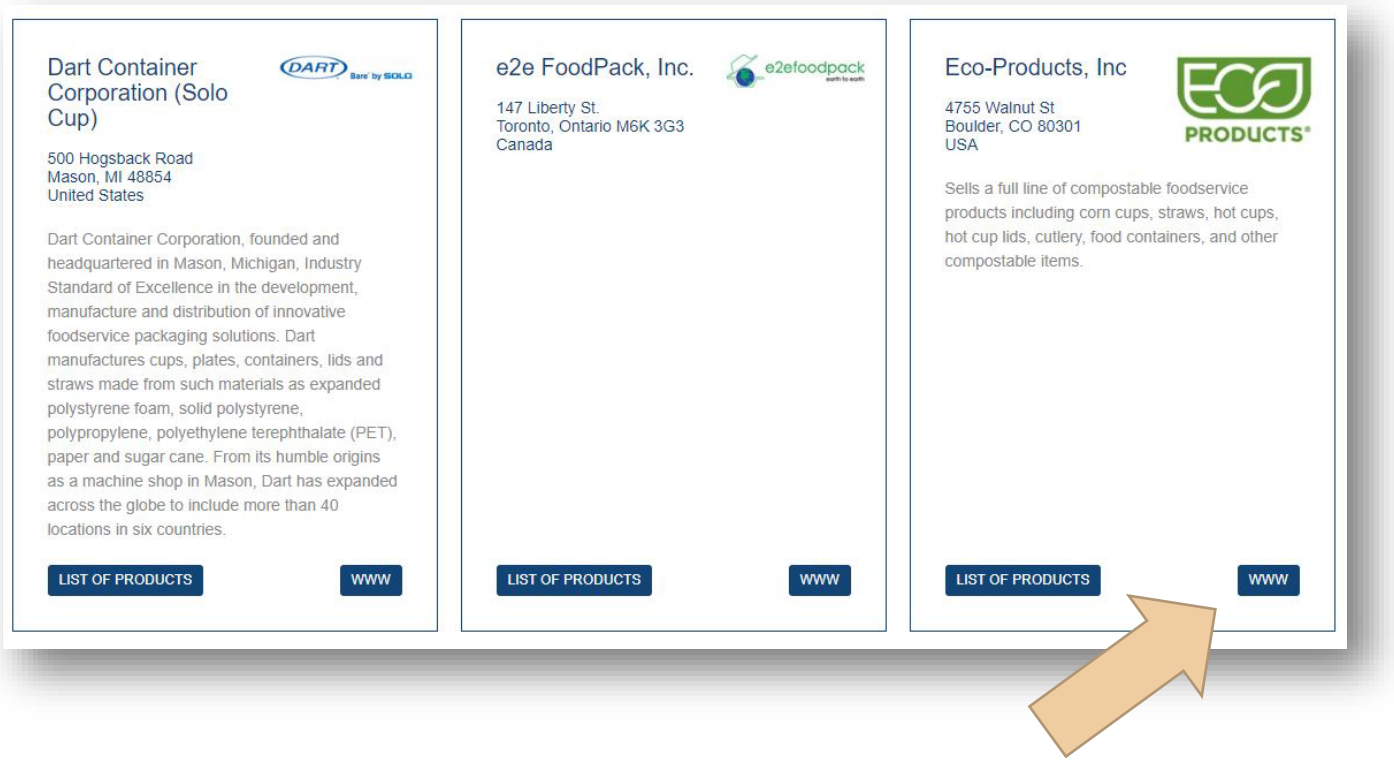
Use the NAME, CATEGORY, AND SUBCATEGORY listings to identify the desired item in the database. ***For each item, be sure to record the SKU identification code, Product Name/Description, Brand/Company, etc.***



PRODUCTS MANUFACTURED BY THIS COMPANY

Brand	SKU	Name	Category	Subcategory	Color & Printed/Unprinted
Eco-Products	EP-CB13	Compostable Can Liners, 24x32in, 13 gallon, 0.88mil, Green, 25 bags per roll, 8 rolls per case	Bags	Compostable bags, Kitchen Waste Bags	Lt. Green
Eco-Products	EP-CB33	Compostable Can Liners, 30x39in, 30 gallon, 1.2mil, Green, 25 bags per roll, 5 rolls per case	Bags	Compostable bags, Kitchen Waste Bags	Lt. Green
Eco-Products	EP-CB39	Compostable Can Liners, 33 x 39in, 39 gallon, 0.9mil, Green, 25 bags per roll, 5 rolls per case	Bags	Compostable bags, Kitchen Waste Bags	Green Printed
Eco-Products	EP-CB45	Compostable Can Liners, 34x48in, 32 gallon, 1.0mil, Green, 20 bags per roll, 5 rolls per case	Bags	Compostable bags, Kitchen Waste Bags	Lt. Green
Eco-Products	EP-CBLS	Large Compostable Shopper Bag - 10 Gallon	Bags	Compostable bags	-
Eco-Products	EP-CBMS	Medium Compostable Shopper Bag - 7 Gallon	Bags	Compostable bags	-
Eco-Products	EP-CB55	Compostable Can Liners, 42x48in, 48 gallon, 1.0mil, Green, 20 bags per roll, 5 rolls per case	Bags	Yard Waste bags, Compostable bags	Lt. Green
Eco-Products	EP-SB24BASE	Renewable & Compostable Salad Bowl BASE - 24oz.	Foodservice	Bowl	Uncolored Unprinted
Eco-Products	EP-SB32BASE	Renewable & Compostable Salad Bowl BASE - 32oz.	Foodservice	Bowl	Clear
Eco-Products	EP-SB48BASE	Renewable & Compostable Salad Bowl BASE - 48oz.	Foodservice	Bowl	Clear
Eco-Products	EP-SBS48BASE	Renewable & Compostable Squat Salad Bowl BASE - 48oz.	Foodservice	Bowl	Clear

Contact the company directly to coordinate any purchase orders or product questions.



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Sells a full line of compostable foodservice products including corn cups, straws, hot cups, hot cup lids, cutlery, food containers, and other compostable items.

LIST OF PRODUCTS WWW

Contact the Biodegradable Product Institute with any questions about using the database.

1-888-BPI-LOGO (274-5646)

5. Appendix of Industry Literature on Compostable Products

COMPOST MANUFACTURERS' DECISION-MAKING GUIDE TO

Accepting Or Rejecting Compostable Products

US Composting Council®

Compostable Products Composting Observations

Observations reflect compostable products certified to meet ASTM D6400 and D6868 standards and meet BPI limits on fluorine content.

1 Contamination from non-compostables is often the primary problem for compost manufacturers, not the compostable products themselves. Some composters may view compostable products that have not broken down and are appearing in the final compost as contaminants.

2 Generally speaking, compost manufacturers are not seeking compostable products as a feedstock. Instead, compostable products are often an inherent part of accepting postconsumer food scraps for composting and are actually a "tool" to help procure food scraps from generators.

3 Confusion generally about sorting (what goes in which bin) and more specifically about products that look similar to compostable products (aka "lookalikes") often results in non-compostables contamination in the compostables stream.

4 Successful disintegration (physical and visual breakdown) is composting method agnostic, i.e., compostable products disintegrate using all methods (windrows, individual aerated static piles (ASP), extended ASPs, in-vessel systems), although the rate of disintegration may differ based on the method.

5 Conditions that are optimal for composting are also optimal for disintegration of compostable products.

6 Compostable liner bags increase participation in food scraps diversion programs, mimicking the behavior with trash bags.

7 Source control (at point of generation) is paramount but does not prevent contamination — whether compostable products are accepted or not.

8 Thickness may matter, i.e., the thickness of the compostable products themselves impacts rate of disintegration in the composting process (akin to wood chips vs. wood shavings).

9 Size reduction helps increase surface area for biological degradation (just like grinding/shredding wood). It also assists with opening compostable liner bags, and/or to mix and homogenize compostable products with other feedstocks prior to introducing them into the compost piles.

The Bad News About BioPlastics & Compostables

THESE PRODUCTS SOUND PROMISING BUT ARE NOT THE ANSWER

- Across numerous measures, compostable and bioplastic foodware have even worse environmental impacts than their conventional alternatives.
- Compostable products and bioplastics often produce more greenhouse gas emissions (GHGs) than single-use plastic due to emissions created during the agricultural phase.
- Growing crops to make these materials also requires significant amounts of fossil fuels, farmland, and water - all precious resources that can be used to grow actual food.
- Much compostable packaging relies on toxic per- and polyfluoroalkyl substances (PFAS) to repel water and oil and researchers have shown that PFAS can leach into compost.
- Most bioplastics and compostable packaging will not break down in a backyard bin - they can only be composted by a high-heat industrial composting facility. Unfortunately, very few cities have these facilities which means bioplastics often end up in landfills and incinerators.
- Many products that claim to be compostable or recyclable aren't collected for either recycling or compost. If they do get collected, they may still get diverted to landfill or incinerator.
- When compostable products end up in a landfill or incinerator, their climate footprint increases: compostable packaging that ends up in landfills releases methane, a greenhouse gas 30 times more potent than carbon dioxide.
- Unlike food waste and yard trimmings, compostable packaging and bioplastics do not add valuable nutrients to compost.
- Composting facilities don't want bioplastics, and many don't accept compostable foodware because of the contamination they cause.
- Composters serving Oregon ask residents not to put any plastic compostable foodware in their green bins and many commercial composting facilities in California do not accept bioplastics, and some don't accept any foodware at all.

A Message from Composters Serving Oregon:

Why We Don't Want Compostable Packaging and Serviceware

Every year, the Pacific Northwest's compost industry turns hundreds of thousands of tons of yard and food wastes into nutrient-rich compost for agriculture, nurseries, landscaping businesses and home gardens.The quality compost products that we create develop healthier and more resilient soil, reduce greenhouse gas emissions, recycle nutrients, conserve water, and may reduce the use of synthetic fertilizers, pesticides and herbicides.

"Compostable" packaging and serviceware items have been on the rise for the past decade and they are increasingly ending up in our facilities. These materials compromise our composting programs and limit many of the environmental benefits of successful composting.

Here are nine reasons why we don't want "compostable" packaging or serviceware delivered to our facilities:

1. **They don't always compost:** Not all 'certified' compostable items will actually compost (break down) as fully or quickly as we need them to. This is because certification standards test compostability based on laboratory conditions. Those conditions are not always replicated in the real world (our facilities) which means that some "compostable" items don't fully compost. The result is a finished compost that is contaminated with bits of partially degraded "compostable" material.

2. **Contamination happens:** As a consumer, you may sort properly – but your neighbor might not. When collection programs accept compostable products, non-compostable look-alike items inevitably end up in the mix. These materials then must be removed, either at the start (when we receive them) or at the end (as pieces of garbage mixed in with finished compost). Either way, this contamination increases our operating costs and degrades the quality of our product, which makes the compost industry less economically viable.

3. **They hurt resale quality:** We don't want to produce finished compost that is contaminated with fragments of packaging and serviceware, and our consumers won't purchase contaminated material. Contamination lowers the value of our product, making it difficult and sometimes impossible to sell. When fewer people use compost, its environmental benefits aren't realized.

4. **We can't sell to organic farmers:** Farmers often use compost in the production of certified organic foods. National standards prohibit the use of many different packaging materials when making compost used to grow crops certified as "USDA Organic". Accepting packaging and serviceware at our facilities hinders our ability to provide finished compost to organic farmers.

5. **They may threaten human and environmental health:** Packaging designed for water and grease resistance as well as other consumer packaging may contain chemicals that can transfer into finished compost. From the compost, these chemicals may then transfer to ground and surface waters, be taken up by plants, and lead to negative health impacts. While some chemicals of concern are being voluntarily phased out by some packaging producers, not all have been outlawed, and alternatives are not always guaranteed to be safe. Separately, non-degraded fragments of plastic packaging can contaminate finished compost, intensifying environmental health concerns when it is used by buyers. We want to keep our compost clean and safe for all.

6 **It increases our costs and makes our job harder:** Some of us have accepted compostable packaging in the past, and found that loads of compostable packaging require us to change our processes, adding water, using more energy and spending additional resources to produce finished compost. Some types of compostable packaging mostly degrade into carbon dioxide and water and leave behind little of value for all of the extra effort required.

7 **Just because something is compostable doesn't mean it's better for the environment.** Oregon DEQ has found that compostable serviceware often has a larger (life time) environmental footprint than non-compostable items*. For example, compostable materials may require more fossil energy use, release more greenhouse gases, or result in more ecological toxins than their non-compostable counterparts, mostly due to how they're made. The research confirms what scientists already know: that *what materials are made of, and how they're made, may be more significant than whether they're composted vs. landfilled*. "Composting" and "compostable" are not the same idea. Composting is a beneficial treatment option for organic wastes, but "compostable" is not a guarantee of low impact.

8 **In some cases, the benefits of recycling surpass those of composting.** Some items, like paper bags, can be either composted or recycled. Generally speaking, the recycling of manufactured materials (such as packaging) back into new products or packaging can provide greater overall environmental benefits than composting does.

9 **Good intentions aren't being realized.** Compostable items often cost more – sometimes up to five times as much as non-compostable alternatives. That's a lot of money spent on products that might not actually help the environment – money that could be spent in more productive and beneficial ways.

Not only do compostable products often cost more to purchase, they also drive up the costs to operate our facilities and impede our ability to sell finished compost. Compostable packaging is promoted as a means of achieving "zero waste" goals but it burdens composters (and recyclers) with materials that harm our ability to efficiently process recovered materials. Reusable dishware is almost always a better choice for the environment. If you must use single-use items, please don't put them in your compost bin.

We need to focus on recycling organic wastes, such as food and yard trimmings, into high-quality compost products that can be used with confidence to restore soils and conserve resources. Compostable packaging doesn't help us to achieve these goals. We need clean feedstocks in order to produce quality compost.

Please help us protect the environment and create high quality compost products by keeping "compostable" packaging and serviceware out of the compost bin.

Thanks for your cooperation!

REXIUS COMPOST & ORGANICS

Dirt Hugger ORGANIC COMPOST CO. - OR / WA

Recology ORGANICS OREGON

REPUBLIC SERVICES Pacific Region Compost

LANE FOREST PRODUCTS The company to grow with

DESCHUTES RECYCLING Compost Facility

Pendleton Sanitary Service, Inc. Reduce, Reuse, Recycle & Compost!

ROGUE COMPOST EST. 2002

WASTE PRO

*See https://www.oregon.gov/deq/FilterDocs/compostable.pdf

PFAS Brief

US Composting Council®

This brief is for our members and their stakeholders to use for distribution and information about Per- and Polyfluoroalkyl Substances (PFAS) and compost.

Household Sources of PFAS

- Nonstick cookware
- Stain resistant carpets
- Wrinkle free/water shedding clothing
- Lubricants
- Paint
- Popcorn bags
- Pizza boxes

The US Composting Council shares the public's concern and is watching the emerging science closely. We are advocating for removal of PFAS from consumer products and educating our legislators about the current science and the difference between highly contaminated sites and background levels found almost everywhere.

What are PFAS?

Per- and Polyfluoroalkyl substances (known as PFAS) are man-made fluorinated compounds that have been placed into products since the 1940s for their stain- and grease-repelling properties (see Sources box). Manufacturing of two of the chemicals, PFOS and PFOA, has been phased out in the U.S. due to US EPA rulings in 2002 and 2015 that restricted their manufacture.

While it is clear that PFAS chemicals in high concentrations are harmful to human health, consider:

Using compost is one of the most important ways to mitigate climate change, clean and filter stormwater and contaminated soils, increase organic matter and beneficial microbes in soils, and to regenerate soils to grow food that is good for human health.

- Amounts of PFAS found in compost at facilities across the country are less than those found in other sources that are being monitored by the US EPA.
- It is an unfortunate reality that since PFAS have been so widely used and are so persistent in the environment that they have been found almost everywhere researchers look – in forest soils, household dust, rainwater and even the bloodstream of nearly every American. It is no surprise, then, that they can find their way into compost, although at very low levels.
- Amounts of PFAS typically found in compost are less than those found in many consumer products and even household dust –10,000-50,000 parts per trillion (ppt).[1] The amount of PFAS set in the US EPA drinking water health advisory, 70 ppt, is like a grain of salt in 100 tons of mashed potatoes, or like 4 grains of sugar in an Olympic swimming pool. This is very different from sites manufacturing PFAS, where levels can be 100,000-500,000 ppt.
- Unlike those actively producing or using PFAS in their products, compost manufacturers are passive receivers of PFAS from products used by manufacturers and everyday consumers.

[1]Trudel et al., Risk Analysis Vol. 28, No 2, 2008

PFAS Brief

US Composting Council®

States with Current Bills Prohibiting PFAS, 2021

Arizona: AZ HB2095
Connecticut: CT HB05818
Maryland: MD HB22
Minnesota: MN SF373, HF79D
New Jersey: NJ A3350
Rhode Island: RI S0110
Vermont: VT S0020
Virginia: House Bill 1712

Check your state to see if any bills have been introduced!
legiscan.com
Search term: PFAS

How are compostables changing to meet the emerging science?

Biodegradable Products Institute (BPI):
BPI's new standard for fluorinated chemicals went into effect on January 1, 2020. Products may no longer be claimed as BPI Certified, whether on the product itself, or on a product's packaging or marketing materials, unless it meets all conditions of the rule, including no intentionally added fluorinated chemicals (as demonstrated in Safety Data Sheets) and a test report showing less than 100 ppm total fluorine.

Compost Manufacturing Alliance (CMA)
Total fluorine (F) analysis is required for approval by Compost Manufacturing Alliance and to determine if foodservice packaging meets any local requirements for F content.

We need your voice to help educate and avoid undue restrictions.

Impress on your community, lawmakers and regulators that:

Compost is a beneficial, natural product that will improve human health and our planet.

We recycle organic matter and nutrients from biosolids, food waste and other residuals back to farmland, gardens and soils. See our compost benefits factsheet for benefits to highlight .

Help us tell the story that compost is NOT a primary source of PFAS!

Compost facilities do not use PFAS. These compounds can find their way into compost, typically at very low concentrations. PFAS they are persistent and ubiquitous in our environment so they are found pretty much everywhere researchers look.

Put Compost and PFAS in Context.

Use the facts about the small concentrations in compost, in comparison with other sources of PFAS (see reverse side) to demonstrate that compost is not typically a significant exposure route to harmful levels of PFAS.

Lobby at the state and federal level for removal of PFAS from consumer products.

For example, the Minnesota Composting Council, in its 2021 Legislative Platform, calls for "banning sale, distribution, or use of PFAS chemicals in food packaging." (See chart at the left for other state actions.) Removing these chemicals at the source is the most effective way to reduce the amount we are all exposed to.

Exposure to PFAS from use of compost is minimal. Assessments of contact from numerous state environmental agencies indicate that inhalation or ingestion of typical compost does not threaten human health.

See the extensive resources at the USCC's PFAS in Compost Resource Center, compostingcouncil.org/PFAS