

Wasted Food Solutions: Ohio Spotlights to Inspire



In 2020, the Center for EcoTechnology (CET) received a Sustainable Materials Management grant from EPA Region 5 to work with solid waste districts and other stakeholders across Southwest Ohio, to help strengthen the wasted food marketplace. As part of this initiative, CET conducted an analysis of the marketplace, hosted multiple sector-specific and solution-specific workshops, provided direct waste assistance, and developed spotlights featuring businesses across the region. In addition to providing environmental benefits, these strategies led to cost savings and environmental satisfaction as well. Although specific initiatives are unique to each operation, the opportunities to prevent, donate, and recycle our surplus food are abundant.

Cincinnati Zoo & Botanical Garden

The [Cincinnati Zoo & Botanical Garden's](#) waste diversion strategy is rooted in the organization's reverence for wildlife and the environment. This zoo, the second oldest in the United States, was declared **the Greenest Zoo in America in 2016**, and for good reason. The Zoo is committed to expanding their sustainability efforts when it comes to wasted food and recycling, recognizing the potential for material recovery from their over 1.5 million annual visitors. The 55,000-square foot facility houses three cafeterias, where food waste reduction, diversion, and rescue programs are practiced.

The success of these programs hinges on the Zoo's food service partner [SSA Group](#) (SSA), who matches the Zoo's commitment to sustainability and conservation. Recognizing the importance of coordinating with third-party vendors on wasted food programs of this scale, CET helped advance communications between the Zoo and SSA. Mallory Geresy, the Zoo's Zero Waste Manager, said ***"Working with CET has been a great experience. CET has facilitated the conversation between the Zoo and SSA helping us focus our efforts to increase education, training practices, and effective signage to reduce our contamination and lay the groundwork to be able to expand our collection efforts in the future."***

The Zoo's composting efforts date back to 2011, when food scraps were composted from three herbivore exhibits, along with animal bedding and waste. Currently, **the Zoo utilizes a Harp CX5 Biodigester for their on-site composting system, capable of processing 1,000 pounds of organic matter per day.** The resulting soil amendment, which the Zoo has termed 'Fionalizer' after an adored young hippo, is produced within just a 24-hour period. This finished product is currently being pioleted in the Zoo's operations.



Cincinnati Zoo & Botanical Garden- Continued

The clean, organic feedstock collected for the Zoo's composting operation requires the diligent use of food scrap collection bins. To address bin contamination proactively and use the system to its full capacity, CET worked with the Zoo to raise awareness and ensure only acceptable items are included. Recognizing that intentional communications, visual cues, and trainings are key to successful food scrap collection, CET provided training support to new SSA staff and offered customizable signage for both the staff and customer-facing bin areas. On the customer side, the Zoo is working on updating the cafeterias' front-of-house waste receptacles to include shadowboxes with examples of acceptable items. For new employees, the Facilities Materials Management Plan, which catalogs all waste materials generated within the Zoo's cafeterias, is a helpful training tool. Virtual trainings and tours of the Zoo's bin areas have also been added when in-person methods aren't possible.

Through an enhanced staff training program and the increased education of guests, **the Zoo's compost collection is anticipated to expand in the 2022 season, bringing their Harp system to its full processing capacity.** In addition to strong composting efforts, the Zoo has a history of **donating surplus food** to [La Soupe](#), an organization that transforms donated ingredients into meals for those in need. CET assisted the Zoo in reestablishing this program in addition to exploring a new relationship with the [Society of St. Andrew](#), a gleaning organization with a flexible schedule for picking up surplus food from the zoo. **Between its strong composting program and food donation efforts, the Cincinnati Zoo & Botanical Garden is a model for other large entities aiming to sustainably manage their wasted food.**



Findlay Market

Located in the heart of Cincinnati, [Findlay Market](#) is a treasure trove of artisanal food in a vibrant, bustling public space. **The Market brings together over 50 vendors of farm fresh, locally sourced, homemade, and specialty foods**, which are enjoyed by more than one million visitors each year. Weekends at Findlay include a farmers market, outdoor market, and special events that offer seasonal foods, products, and entertainment for locals and visitors alike. **Sustainability is integral to Findlay Market's mission**, exemplified by their effort to involve their diverse set of vendors and customers in their waste reduction initiatives.

Findlay Market **reduces and recovers surplus food** through partnerships with food rescue agencies and a **composting** operation; initiatives that all vendors are welcome to opt into. Recoverable food is collected by [La Soupe](#), an organization that transforms Findlay's fresh produce into new meals, and the Society of St. Andrew, a gleaning network that provides food to those in need. **Several vendors separate their inedible food scraps from the trash in a process called source separation.** The Market also provides public collection bins where residents can bring their food scraps and other materials from home for composting or recycling. The food scraps collected from vendors and customers feed the **on-site compost system.** Several Earth Tubs mix and heat the scraps, breaking them down into finished compost that is used for landscaping on the grounds. Findlay's localized diversion strategy has clear environmental benefits, and the donation program expands the reach of vendors' fresh and delicious foods. Findlay collaborated with CET to increase participation in both programs, helping them reach their full potential.



Image courtesy of Findlay Market

Findlay Market- Continued

As with any market of this scale, **outreach and communication are essential** to increase vendor participation and build awareness among the thousands of weekly customers. Both the composting and food donation programs are voluntary, creating the space to engage vendors through education and incentivization. To increase the success of this effort, **CET provided support for staff outreach and training**. Education is offered to clarify which materials are acceptable in the food waste collection bins versus the recycling receptacles and trash cans, along with best practices for safe food handling when donating. **The environmental, social, and financial benefits of food waste prevention activities** are all a part of the conversation. Actively engaging vendors in these topics leads to greater wasted food diversion.

The tremendous volume of guests and the variety of vendor serviceware make it difficult to obtain clean streams of material from the public-facing recycling and food scrap collection bins. Following a visit to the Market in October 2021, CET suggested **co-locating bins and using clear and detailed waste bin signage** as ways to help educate guests and staff on proper separation of recyclables, trash, and compost items. Streamlining the current mix of compostable, disposable, and recyclable serviceware items can also help support proper separation and reduce cross-contamination. Findlay Market is exploring the idea of a shared purchasing contract for single-use items such as plates, napkins, silverware, to-go packaging, and cups.

As necessary as it is to educate guests on proper waste separation practices, **it is equally important to educate new and existing staff on food waste reduction programs**. CET is a reliable resource for Findlay Market staff to learn the latest waste management best practices. Through consistent educational support and outreach to existing vendors, Findlay Market has seen greater participation in both their food donation and composting programs. As the composting program expands, Findlay is considering selling the biofertilizer it produces, adding yet another sustainable local product to the impressive array of goods and services they already offer.



Jungle Jim's International Market

[Jungle Jim's International Market](#) (Jungle Jim's) is a full-service grocery store that operates two storefronts, covering over 500,000 square feet, and spanning more than 180,000 products. Owned by, Jim Bonaminio, Jungle Jim's is known for its **unique décor and extensive product selection**, and the business features many repurposed displays. Some of these were created from **upcycled materials**, like The Cooking School, a kitchen outfitted from materials salvaged from Jim's mother's house, while others are displayed directly as vintage secondhand items.

For over 35 years, Jungle Jim's has maintained a **Reduced Deals section**, featuring marked-down produce, deli, meat, and bakery items. Started as an opportunity to rotate produce through the store, this section has grown over time. With regular frequency, staff from each department review existing stock on the sales floor and cull any items that do not meet the business' quality specifications.

Staffed by five to seven employees, the Reduced Deals department is responsible for pricing these items and returning them to the sales floor in the designated section. New hires work with the store's Buyer to understand the pricing strategy and product throughput.

Reduced Deals attracts a wide variety of shoppers – from customers seeking bargains to chefs looking for products that can be prepared and served the same day. While much of the program features items pulled from the sales floor, the business will purchase products specifically destined for the Reduced Deals section on occasion. **Products from the Reduced Deals department include overripened strawberries, lemons, limes, and apples.**

Through this initiative, Jungle Jim's has been able to **provide additional value to customers while reducing waste and lost revenue**. The department typically breaks even or turns a profit, and the amount of produce that is discarded is significantly lower compared to stores that do not utilize a similar program, **creating a win for the company, the community, and the environment**.

CET worked with Jungle Jim's to further their **sustainability efforts**, identifying a new strategy to repurpose packaging. Empty pickle buckets from the store are now being repurposed by Earth Peak Organics, which will reuse them with a household food scraps recycling program. Pickle buckets are unable to be recovered in single stream recycling, making reuse for food scraps collection an **environmentally friendly and utilitarian solution**. At Jungle Jim's, all materials – from vintage displays, to produce, to pickle buckets – are valued at every stage of their lifecycle.



MadTree Brewing

Nine years ago, [MadTree Brewing](#) (MadTree) was formed around a commitment to community. Given this core value, the company soon came to own their responsibility to maintain the natural resources that they use in their brewing process. MadTree is more than an **expert beer maker, a taproom, or an event planner**; the business is **committed to reducing waste**. The byproducts of MadTree's brewing and service are sustainably repurposed, as their operations model steers away from landfills.

MadTree's commitment to maximizing environmental and community benefits is evident in their 2020 Impact Report, a snapshot of the strides they've made to curb and divert waste, offset their carbon footprint, build a diverse team, and more. The positive impact they plan to have in the future appears in the document as both attainable and laudable.

As waste diversion is an integral facet of sustainability, MadTree has long been **tracking the waste from the brewing process**, within the taproom, and at events to understand how they can better reduce and divert it. **Since 2016, the brewing company has diverted 100% of their spent grain** to Reinhardt Beef Farm, one of MadTree's many community ties. **This relationship has prevented over 5,000 tons of spent grain from entering the landfill so far.**

MadTree uses **reusable serviceware** to serve beer and food in their taproom and offers **100% compostable serviceware** through their catering partner [Catch-A-Fire](#) as a non-reusable alternative. **The use of sustainable serviceware prevented 73,900 pounds of waste from entering a landfill in 2020 alone.**



Image courtesy of MadTree Brewery

MadTree Brewing- Continued

MadTree uses recyclable items whenever compostable materials aren't possible. They utilize PackTechs as a six-pack carrier, which are composed of the endlessly recyclable material HDPE. In distributing and selling their beer, MadTree is focused on recycling as many PackTechs as they contribute to the market. The brewery also recently secured funding for a baler, a machine capable of compressing the super sacks and malt bags that contain the main ingredients of their brewing process. Turning these massive bags into compact, transportable bales allows recyclers to easily buy and transport them, **keeping them out of landfills.**

In April 2021, MadTree presented at a **CET workshop on wasted food solutions**, where they connected with other like-minded business owners and food rescue agencies. **MadTree makes waste reduction and diversion a community**

effort and is continuously working to maximize sustainability, in part through work with outside advisors in the nonprofit, business, and environmental sectors. MadTree also **hosts an Ascending Women Speaker Series**, which provides space for women to share their accomplishments. These events enable participants to **connect, learn, and grow together.** Featured panelists include Suzy DeYoung, founder of [La Soupe](#), and Julie Shifman, founder of [Last Mile Food Rescue](#), both leaders in rethinking the path for surplus food in Cincinnati.

CET is excited to stay updated on the company's future waste reduction and diversion endeavors and work with MadTree to build a sustainable future.



The Foodbank, Inc.

18 million pounds of food: that's how much food is acquired, grown, and distributed per year by the [The Foodbank, Inc.](#) in Dayton, Ohio to **provide hunger relief** to Montgomery, Greene, and Preble counties. Over the course of 40 years, **The Foodbank has amassed 60 retail partners including grocery stores, distribution centers, and wholesalers.** In addition to this massive intake, which is organized in their **37,000-square-foot warehouse space**, The Foodbank also maintains **40 raised garden beds in which they grow 4-5 tons of fresh produce per year.** To distribute these chemically-free grown and donated foods, they work with over 100 partner agencies, host an on-site drive-thru, stand up mobile pantries across Montgomery, Greene, and Preble counties, and hold mass distribution events. The Foodbank goes beyond its essential purpose to fight food insecurity in the Miami Valley with its impressive **on-site composting facility, which presents further benefits to the local community and minimizes the organization's impact on the environment.**

Of the millions of pounds of food that The Foodbank acquires and distributes annually, all but 1-1.5% can be redistributed. While a small margin, it's still a sizeable volume (around 220,000 pounds per year) to be recovered.

That's where their **industrial composting system** comes in. Any expired or inedible food that is delivered to The Foodbank's back dock is separated by volunteers who de-package and de-sticker the items, collect them in large green totes, and add them to an on-site Earth Flow composting vessel. **This composter, enclosed by a 20-by-8-foot converted shipping container**, has been running since 2019 and composts large quantities of food in a short period of time. This system is also designed to keep critters away and has a biofilter exhaust feature that mutes any potential unpleasant odors.



The Foodbank, Inc.- Continued

The resulting compost product is nearly sufficient to **supply The Foodbank's 40 garden beds with nutrients**. Licensed as a Class II Composting Facility by the Ohio EPA, The Foodbank can also accept food scraps from outside sources and distribute their finished compost product. The Foodbank's central location in the Greater Dayton Metro Area is leveraged by their **Compost Bucket Program**, which enables residents to conveniently drop off their food scraps. Compost Bucket Program participants receive a green container with a sealable lid, which they bring home and return full of scraps to The Foodbank as often as they'd like. With this program, **around 1,000 pounds of valuable organics are contributed to the composting system per week, and residents have a more holistic understanding of The Foodbank's work at large.**

Partnering with CET enabled The Foodbank's composting best practices to reach an even wider audience. In August 2021, **The Foodbank hosted CET's compost workshop**, which brought together business and food rescue agencies interested in sustainable solutions for inedible food waste. At a CET-hosted meeting of Ohio food rescue organizations

in February 2022, The Foodbank exemplified how a composting system can work in tandem with an extensive food rescue operation.

In addition to the community and environmental benefits that composting invites, The Foodbank's operation has yielded significant financial savings. Before installing the composter, The Foodbank was spending nearly \$15,000 per year on food waste disposal. They've since been able to reduce the frequency of their trash collection service while reducing costs. They are **saving about \$10,000 per year** on waste disposal and compost previously purchased for their urban garden. Since the operation's inception, it has **diverted over 100,000 pounds of food waste from landfills.**



The Center for EcoTechnology (CET) helps people and businesses save energy and reduce waste. CET acts as a catalyst to accelerate the development of a vibrant marketplace to divert wasted food from the commercial and institutional sectors. We have been a leader in the wasted food reduction and diversion movement for more than 20 years, implementing some of the first wasted food composting programs in the country, and contributing to effective public policy.

Feeling moved to act? Contact CET's Wasted Food Solutions hotline to access free virtual or on-site technical assistance.

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This document was developed by the Center for EcoTechnology and was made possible by a Sustainable Materials Management Grant from EPA Region 5.