

Case studies were chosen to display the variety in methods and compost technologies that exist for repurposing organic waste in Michigan and throughout the US. The case studies showcase what the local community and surrounding neighborhoods are currently doing to manage organic waste. Despite the variety in operations, most interviewees shared a few common topics. First, education on contamination and impact of using compost was mentioned as an essential component to running a compost operation. Second, most operations obtained feedstocks from several different sources, such as residential curbside and drop-off, commercial haulers, and landscapers, in order to maintain consistent feedstock. Lastly, some operations created special blends, bagged finished product, or offered application services in order to supplement compost sales.

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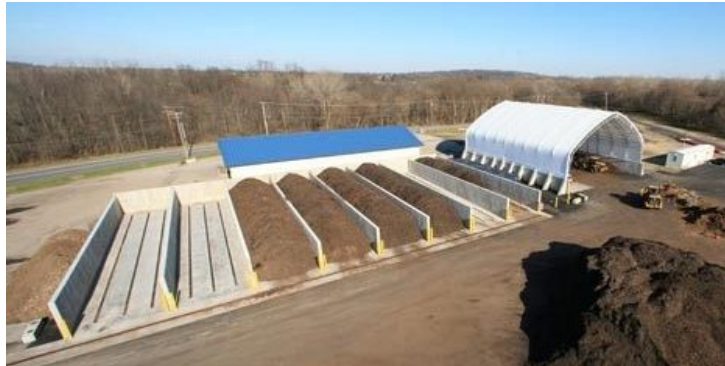
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## ASP COMPOSTING

### OCRRA AMBOY, CAMILLUS, NY

6296 Airport Rd, Syracuse, NY 13209



|  |  |
|--|--|
| <b>Type of system:</b>                       | Aerated Static Pile, food waste bulked with yard waste   |
| <b>Total site size:</b>                      | 13 acres   |
| <b>Number of people served:</b>              | 460,000 + people   |
| <b>Staff:</b>                                | 3 operators  |
| <b>Hours of operation:</b>                   | April 1 to November 30: Monday through Saturday, 7:30 AM – 4:00 PM<br>December 1 to March 31: Monday through Friday, 7:30 AM – 4:00 PM   |
| <b>Equipment on site:</b>                    | Two bucket loaders, a skid steer, two shredders, and a trommel screen.   |
| <b>Throughput time:</b>                      | 3 to 4 months  |
| <b>Throughput total volume:</b>              | about 6,600 tons food waste, 36,000 cy of yard waste   |
| <b>Total permitted capacity:</b>             | Up to 9,600 tons of food waste per year  |
| <b>Material Source(s):</b>                   | Residential, commercial, institutional, manufacturing  |
| <b>Collection Method:</b>                    | Residential drop-off, commercial collection  |
| <b>Size of windrows/piles:</b>               | 8 concrete bays, 20 ft x 100 ft  |
| <b>Processing building size:</b>             | 50 x 100 square feet   |
| <b>Average sales price of product sold:</b>  | <p>Residential Fees:</p> <ul style="list-style-type: none"> <li>• Compost by the Trunk Load 1/2" Screened: \$10/trunk</li> <li>• Bulk General Compost 1/2" Screened: \$15/cu. yd.</li> <li>• Bulk Premium Compost 1/4" Screened: \$20/cu. yd.</li> <li>• Mulch by the Trunk Load Double Ground: \$5/trunk (3,000 cy in 2018)</li> <li>• Bulk Wood Mulch Double Ground: \$12.50/cu. yd.</li> </ul> <p>Commercial Fees:</p> <ul style="list-style-type: none"> <li>• Double Ground Wood Mulch: \$12.50/cu. yd.</li> <li>• 1/2" Screened Compost: \$15/cu. yd.</li> <li>• 1/4" Screened Compost: \$20/cu. yd.</li> </ul> <p>Bagged compost (1 cu. ft. bags): \$5 each or 5 for \$20</p> |
| <b>Total volume sold per year:</b>           | About 3,000 cy of mulch  |
| <b>Funding mechanism:</b>                    | Unknown  |
| <b>Local permitting/zoning requirements:</b> | Subject to state permitting but not local because of public authority status   |

## BACKGROUND

OCRRA's Amboy compost site, located just south of Syracuse, NY, in Camillus, NY, was originally a yard waste processing site. After a waste audit revealed that 20% of the county's waste stream was food, OCRRA began investigating food scrap composting. It was in 2008 that OCRRA members went to a conference in Pennsylvania where they met Peter Moon of O2 Compost and conducted a pilot food waste composting program using aerated static pile. By 2013, the site was developed into a permanent food waste composting site with 8 concrete bays for aerated static pile composting, permitted to accept up to 9,600 tons of food waste per year. The site is partially paved with remainder of drivable areas using millings for driving surfaces. There is a leachate collection tank, as well as 2 retaining ponds for storm water management.



## OPPORTUNITIES AND RISKS

The Amboy compost site is open year-round to residents and commercial entities alike. Residents can purchase drop off passes to drop off unlimited trips of yard waste and food waste. Commercial entities pay by the load for yard waste/woody matter, or for food waste, by the ton using the scales on site.

Food waste arrives typically from waste haulers that either specialize in food waste hauling or have a food waste hauling part of their business. This food waste comes from institutions and schools primarily, as well as grocery stores. OCRRA also receives significant quantities of food waste from commercial food manufacturers. The site has no dedicated de-packaging capabilities and has used human labor for depackaging, along with experimental use of a shredder for depackaging.

Challenges arise in maintaining steady feedstock from food processors because of the incurred transportation fees. Odors have previously been an issue, but OCRRA has adjusted the food waste mix and oxygen levels to reduce odors. They also provide education to the community to not only reduce contamination for incoming material but to market their compost products.



## THE SOLUTION

Food waste is mixed at a volume ratio of 3 parts bulking agent/yard waste to 1-part food waste. This is very close to 1:1 by weight. Thus, OCRRA accepts significant quantities wood waste, including trees, brush, and yard waste in addition to food waste. About 3,000 cy of mulch was sold this year from this inflow. Each bay is prepared with a cushion of wood chips as a bottom layer to assist with collection of draining liquids from food waste that has not yet absorbed and increase aeration throughout the bunker as air is pumped in through the pipes.

Near the site entrance, the office trailer and scale accommodate incoming loads with accurate tonnages for proper processing. The processing building is a fabric temporary structure (50 x 100) allowing processing out of the elements. Poured concrete walls provide the building sides and base, allowing bucket loaders to efficiently move material. Finished product is stored until screened, then staged for sale. OCRRA has USCC Seal of Testing Approval (STA) certified compost products and sells to agricultural and residential customers, as well as 30 different retailers. The site also has adequate room for ready to mix bulking agent for incoming food waste. A metal building 60 feet by 100 feet houses equipment and the shop. Currently, the Amboy site is staffed with 3 operators who operate two bucket loaders, a skid steer, two shredders, and a trommel screen.



# FOOD SCRAP COLLECTION AND WINDROW COMPOSTING

## SPURT INDUSTRIES, WIXOM, MI

2041 Charm Road, Wixom, MI 48393



|   |  |
|---|--|
| <b>Type of system:</b>                                  | Windrow  |
| <b>Total site size:</b>                                 | 14 acres   |
| <b>Areas serviced:</b>                                  | Southeast, Central, and Southwest Michigan                                   |
| <b>Staff:</b>   | 5 to 6 people  |
| <b>Hours of operation:</b>                              | 7am – 5pm Monday through Friday  |
| <b>Equipment on site:</b>                               | Wheel loaders, bulldozer, trommel screens, slow-speed shredder, excavator    |
| <b>Throughput time:</b>                                 | 1 year from time material is received to the time it is sold                 |
| <b>Throughput total volume:</b>                         | 75,000 CY, with <1% food waste and minimal compostable packaging             |
| <b>Total possible/permitted capacity (cubic yards):</b> | Unknown  |
| <b>Material Source:</b>                                 | Residential, Commercial, Institutional                                       |
| <b>Collection Method:</b>                               | Curbside collection, drop-off (yard waste)                                   |
| <b>Size of windrows/piles:</b>                          | unknown  |
| <b>Processing building size:</b>                        | none   |
| <b>Average sales price of product sold:</b>             | \$10/CY to \$22/CY depending on amount purchased and if delivery is included |
| <b>Total volume sold per year:</b>                      | 25,000 CY produced each year   |
| <b>Funding mechanism:</b>                               | Tipping fees and product sales   |
| <b>Local permitting/zoning requirements:</b>            | Registered with EGLE   |

## BACKGROUND

Spurt Industries has been operating since 1995, with the start of the Michigan yard waste ban. The third owner, Bill Whitley, purchased the operation in 2016 and has since focused on creating a high quality compost product. Located in a western suburb of Metro Detroit, Spurt Industries operates on 14 acres and processes 75,000 cubic yards of material per year using a turned windrow system.

## OPPORTUNITIES AND RISKS

Purchased with no compost background, Whitley was challenged by the steep learning curve but motivated by the desire to positively impact the environment. He referenced sources from Biocycle online in addition to networking at conferences to improve the product. In order to maintain efficiency of operations and a high quality product, contamination is a big focus. Plastic film and glass are the most severe contaminants in potential feedstock, and there is a constant dialogue with commercial haulers and landscapers who deliver material. Whitley found that connecting the dots of low-contamination-in, high-quality-out is most effective with landscapers since they frequently purchase compost from Spurt as well.



Since Whitley prioritized processing food waste, he became a partner in the company My Green Michigan, a food scrap management and hauling company. Originally, My Green Michigan serviced southern lower Michigan and took material to Hammond Farms in the Lansing area, but now the food scraps picked up from the Detroit area goes to Spurt. Providing the food scrap carts and hauling services to their customers allows My Green Michigan to educate on the importance of minimizing contamination before it reaches the compost site.



## THE SOLUTION

Roughly 25,000 cubic yards of product is produced annually from residential and commercial collection, landscapers, residential drop-off, and tree service business sources. Incoming material includes yard waste, BPI certified food service packaging, and food waste, which makes up 1% of the total incoming feedstock. To maintain a high quality product, incoming material is not ground up, such that contaminants can be more easily removed at the end. The two primary products offered are a USCC Seal of Testing Approval (STA) certified compost product as well as Spurt Dirt, which is a topsoil-compost blend.

# FOOD SCRAP COLLECTION AND WINDROW COMPOSTING (RURAL)

## EMMET COUNTY, MI

7363 Pleasantview Road, Harbor Springs, MI 49740



|   |  |
|---|--|
| <b>Type of system:</b>                                  | Passive windrows   |
| <b>Total site size:</b>                                 | 6 acres  |
| <b>Areas serviced:</b>                                  | Petoskey and Harbor Springs  |
| <b>Staff:</b>   | 1 part-time  |
| <b>Hours of operation:</b>                              | 8 a.m. to 4 p.m. weekdays, 8 a.m. to 3 p.m. Saturdays  |
| <b>Equipment on site:</b>                               | Bucket loader  |
| <b>Throughput time:</b>                                 | 9-12 months active composting, 2-4 weeks curing  |
| <b>Throughput total volume:</b>                         | YW: 3,183 CY; FW: 278 CY (incoming)  |
| <b>Total possible/permitted capacity (cubic yards):</b> | 5,000 CY   |
| <b>Material Source:</b>                                 | Commercial, municipal (YW only), residential, institutional  |
| <b>Collection Method:</b>                               | County-hauled, commercial-hauled, self-hauled  |
| <b>Size of windrows/piles:</b>                          | 14 ft x 100 ft   |
| <b>Processing building size:</b>                        | none   |
| <b>Average sales price of product sold:</b>             | Residential Fees: <ul style="list-style-type: none"> <li>Compost, self-loaded: \$20/CY</li> <li>Compost, County-loaded: \$30/CY</li> <li>\$10/CY less during fall sale (Oct-Dec)</li> </ul> Commercial Fees: <ul style="list-style-type: none"> <li>Compost, minimum 20 CY: \$20/CY</li> </ul> |
| <b>Total volume sold per year:</b>                      | 1,300 CY were screened/produced in 2020  |
| <b>Funding mechanism:</b>                               | Emmet County Department of Public Works recyclables sales revenues   |
| <b>Local permitting/zoning requirements:</b>            | Yes, registered through EGLE since 2005  |

<https://www.nextcyclemichigan.com/ncmi-stories/emmetfoodscraps>



### BACKGROUND

Emmet County is a rural county in Northern Michigan. The population ebbs and flows with the season, following the trail of tourists seeking Petoskey stones along the shores of the Little Traverse Bay or making fresh tracks on the cross-country ski trail. While the population is modest, its recycling program is anything but.

The program's parent department, the Emmet County Department of Public Works (DPW) does not rely on tax dollars, instead funding its operations entirely from sales of recyclables and fees for services. The recycling program recovers 60 different materials. 28 day-to-day recyclables are collected via the county's 13 drop off sites and their curbside collection service, the later serving 60% of the county's

households under contracts with local townships and municipalities. Another 32 materials are collected for recycling at the county's Pleasantview Road Drop-off Center, for example mattresses, batteries, and tires. Over 80% of county households use the county recycling program.

### OPPORTUNITIES AND RISKS

The county developed a yard waste composting site in 2005. Yard waste is commonly recycled in Michigan due to a 1995 landfill ban on the material. At the time of implementing the yard waste program, food scrap composting was out of reach, with uncertainty regarding how best to move forward, and whether residential or commercial organics streams would be best suited for a pilot project to explore community engagement.

In 2015 the county initiated a feasibility study, led by RRS, to develop a business case analysis for several iterations of a food scrap recycling program, and specifically helped to design a pilot project to demonstrate community interest and develop programmatic and operational capabilities. The study looked at very specific factors, including the number of trucks needed, capital expenditure, and staffing requirements. It concluded that the program should start with a focus on commercial generators and grow from there. It was determined that the best way to introduce this program was to test it through a pilot program before rolling it out full scale.

### THE SOLUTION

Following a successful pilot in 2015 the county continued to expand the program's offerings. It began as a back-of-house (food preparation, pre-consumer) food scrap only program and has matured to include more commercial establishments, zero waste events and some public collection points.

The county offers twice-weekly collection in 64-gallon carts. While the service was provided at no charge in the program's first year, they now charge businesses per-cart per-pickup to make the program financially viable. Events are pre-certified to include acceptable compostable foodservice packaging (FSP). Compostable bag liners were successfully added across the program as well. In 2019 over 560,000 lbs of food scraps were recovered from commercial customers, nearly 25,000 lbs from public drop off sites, over 6,500 lbs from carts at local farmer's markets and over 4,000 lbs from "zero waste" community events. Since the program's inception the county has recovered over 2 million lbs of food scraps.

The material recovered through the program is processed at the County owned and operated compost site that produces commercially marketed compost. The carbon rich yard waste combined with nitrogen rich food scraps makes for a desirable blend. The site utilizes engineered compost pads on just under five acres of land and is managed with one key piece of equipment – a front loader.



# ON-FARM COMPOSTING OF MANURE AND FOOD WASTE

## KRULL'S COMPOSTING LLC, MAPLE CITY, MI

857 W. Burdickville Road, Maple City, MI 49664



|   |  |
|---|--|
| <b>Type of system:</b>                                  | Windrows   |
| <b>Total site size:</b>                                 | 10 acres   |
| <b>Communities served:</b>                              | Counties: Manistee, Antrim, Benzie, Leelanau; Traverse City  |
| <b>Staff:</b>   | BARC brings in food waste and delivers finished compost. Barry Krull manages the compost piles.                                    |
| <b>Hours of operation:</b>                              | No standard hours  |
| <b>Equipment on site:</b>                               | PTO-mounted turner, tractor, and an application spreader   |
| <b>Throughput time:</b>                                 | 3 months   |
| <b>Throughput total volume:</b>                         | 2,700 CY (incoming feedstock), 1,500 CY (outgoing finished material)   |
| <b>Total possible/permitted capacity (cubic yards):</b> | 10,000 CY  |
| <b>Material Source:</b>                                 | Commercial yard waste; manure from farms; food waste from hospitals, schools, grocery stores, restaurants, and residential.        |
| <b>Collection Method:</b>                               | Drop off (residential), BARC collects food waste with dump truck   |
| <b>Size of windrows/piles:</b>                          | unknown  |
| <b>Processing building size:</b>                        | none   |
| <b>Average sales price of product sold:</b>             | \$125 per CY, with increasing discounts if purchasing 3 or more CY (NOTE: this sales price may include application and/or bagging) |
| <b>Total volume sold per year:</b>                      | 2019: 300 CY, 2020: 609.4 CY (source: EGLE)  |
| <b>Funding mechanism:</b>                               | Tipping fees and sales of compost  |
| <b>Local permitting/zoning requirements:</b>            | Yes, registered through EGLE since 2019  |

## BACKGROUND

Barry Krull, owner and operator of Krull's Composting LLC has been making compost for over 30 years. His passion started as a hobby and he knew that during retirement he wanted to help provide people with compost products that improved the environment. Over the years, he experimented with different blends and the timing process for adding various feedstocks. In 2018, his composting operation began selling bagged material produced at a roadside stand on his 10-acre farm where he lives.

## OPPORTUNITIES AND RISKS

Krull's Composting serves customers in Manistee, Antrim, Leelanau, and Benzie counties in addition to Traverse City. They do not have large trucks for material distribution but want to be able to help local farmers first. Currently, Krull's is in the process of creating special blends to be sold at a manufacturer of greenhouses.

They take in food waste from grocery stores, restaurants, schools, and their residential drop-off, so contamination can be an issue. Since the mix incorporates clay, screening is difficult, so unwanted material is removed by hand before composting begins.

Currently, they produce approximately 1,500 cubic yards of finished product per year but could increase production to 10,000 cubic yards given their current space.



## THE SOLUTION

Barry, along with four other workers, help with processing material, bagging finished product, mowing the lawn, and other essential processes to maintain the operation. The blends utilize multiple type of feedstocks, including biochar, clay, manure, yard waste, and food waste, the later of which is brought in by dump truck by Alex Campbell from Bay Area Recycling for Charities (BARC). Along with producing

multiple kinds of compost products, Krull's Composting offers compost application services where the compost tea blend is popular with orchards and vineyards.

Part of Krull's mission is to educate customers on how high-quality compost can impact their garden or lawn. Since they offer a residential food waste drop-off program, it gives customers the opportunity to tour the site and learn how Krull's humus-rich products can better maintain nutrients in soils.





## FOOD WASTE TO HOG FARM

### AMERICAN SPOON, PETOSKEY FACILITY, MI

308 Butler Street, Saugatuck, MI 49453



#### BACKGROUND

American Spoon is a Michigan-based, artisanal, small-batch manufacturer of fruit preserves and condiments. They opened in 1982 by Justin Rashid and produce 79 different products.

#### OPPORTUNITIES AND RISKS

In 2015, owner Justin Rashid decided it was time to find a use for the thousands of pounds of food scraps that the kitchen produced each year. He reached out to Lindsey Walker, Recycling Outreach for Emmet County, asking if there were any hog farms that could utilize the scraps. This connection allowed American Spoon to begin repurposing their food scraps and create a more sustainable production process.

#### THE SOLUTION

Since 2015, the American Spoon processing facility in Petoskey, Michigan has worked with a couple different hog farms to use their food scraps for feed and composted their food scraps at the Emmet County compost facility during a transition period when the hog farm they were using shut down. The process began with American Spoon training staff on what material can and cannot be placed into the 55-gallon storage drums. The full drums would then be placed into a refrigerator for up to four weeks, depending on the type of product scrap. Also, products that are unlikely to sell by their expiration date are repurposed as hog feed.

Currently, they work with Serendipity Farms in Wolverine, Michigan. The farm collects food scraps from American Spoon approximately once a week, loading the drums onto a trailer. They collect the food scraps free-of-charge since it's a mutually beneficial relationship. The hog farms have been able to take almost all the food scraps produced, and, one year, 18,000 pounds were diverted to hog feed. This picture is of happy hogs eating peach scraps.



Recently, Emmet County Recycling connected American Spoon with another hog farmer, Seth Strong from Levering. American Spoon had 25 drums of peach skins, pits and juice to dispose of that Serendipity Farms was not interested in. Also, the Emmet County compost facility couldn't take it because of its high liquid content and inability to service the 55-gallon drums. So, the collection of said food waste was an obstacle. Not only is Seth Strong able to feed his pigs with the food scraps, but he is also able to use it as bear bait - baiting bears using day-olds from bakeries, grocery stores, candy manufacturers etc. is common in these parts. One could argue that it does not count toward feeding animals in accordance to the EPA food recovery hierarchy as a highest and best use, or does it?

### **THE CHALLENGES**

The most challenging aspect of diverting food scraps to hog feed has been coordinating pickups based on American Spoon's production rate and the hog farms' needs. American Spoon may produce too much product or not provide enough notice for the hog farm, or the hog farm has constraints on which days they can collect food scraps. It does help to have a second farmer to work with to keep the food scraps moving toward diversion.

## COMMUNITY COMPOSTING

### GROWNYC, NY

New York City, NY



#### BACKGROUND

Funded by the Department of Sanitation for New York City, GrowNYC was created in 1970 and has come to manage the environmental concerns for the city. They have managed the residential food scrap compost drop-off in New York City since 2011. The motivation to start the program came from the desire to reduce waste and turn it into a resource.

#### OPPORTUNITIES AND RISKS

The program accepts yard and food wastes, though dairy and meat, as well as compostables are excluded. GrowNYC recognizes that convenience is at the forefront of ensuring consumers compost, so they are always growing by looking for new sites to host a drop-off or feedback on areas that would benefit from a drop-off site.



#### THE SOLUTION

Throughout all five boroughs of New York City, there are multiple drop-off locations, which consumers can find via an online map at [www.makecompost.nyc](http://www.makecompost.nyc). There are two types of locations for drop off: 1) greenmarkets where consumers purchase produce and 2) community gardens which account for 600 of the drop-off locations. Most organics are processed locally at community gardens, along with a few other local partners.

<https://www.grownyc.org/about>

<https://www.grownyc.org/compost>

<https://www.makecompost.nyc/dropoff>

<https://www.makecompost.nyc/gapinthemap>

<https://www1.nyc.gov/assets/dsny/site/services/food-scraps-and-yard-waste-page/nyc-food-scrap-drop-off-locations>

# BACKYARD COMPOSTING

## HENDERSON COUNTY, NC

1 Historic Courthouse Square, Hendersonville, NC 28792



|   |                                 |
|---|---------------------------------|
| Type of system:                               | Residential Backyard Composting |
| Number of bins sold:                          | 365                             |
| Compost bin price                             | \$25.00                         |
| Number of volunteers recruited                | 10                              |
| Number of volunteers that completed the study | 6                               |
| Study Duration                                | May – July 2021                 |

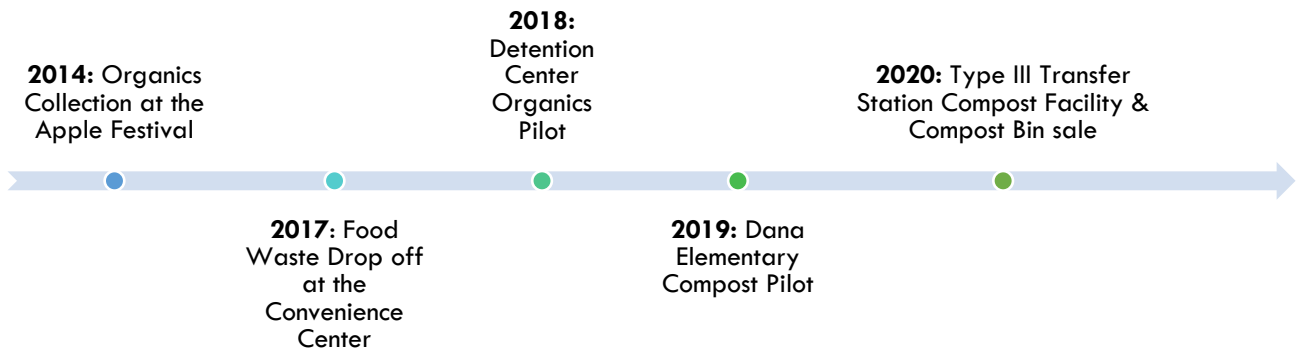
### BACKGROUND

Henderson County, located in Western North Carolina, has a total estimated population of 117,417 people as of 2019. The County also includes five additional incorporated local government entities. The Henderson County Solid Waste Division operates as a self-supporting enterprise fund, separate from the general fund and property taxes. The County maintains a closed landfill and operates two facilities: a regional Transfer Station and residential Convenience Center. In 2020, Henderson County Solid Waste transferred 72,445 tons of Municipal Solid Waste (MSW) and 38,032 tons of Construction and Demolition (C&D) debris to the Upstate Regional Landfill (Republic Services) in Enoree, South Carolina. **On average, about 15 – 30 tractor trailers are sent to South Carolina per day.** Since 2014, Henderson County has piloted a variety of organics programs in the area (see Figure 1) including special events, schools, backyard compost workshops and the first food waste drop-off program in Western North Carolina.



In 2020, staff researched local backyard compost resources and discovered that backyard compost bins were not financially or physically accessible in the community. Out of six local hardware stores in the County, only one had a compost bin in stock, for over \$120.00. In order to increase access and empower residents to compost at home, the County began a discounted backyard compost bin program with support from the North Carolina Department of Environmental Quality (NCDEQ) and the United States Department of Agriculture (USDA). In conjunction with a compost bin sale, staff decided to study the impacts of backyard composting on Transfer Station operations via a volunteer program to determine potential cost savings. Below describes the logistics, challenges, and successes from the first compost bin sale and findings from the volunteer study.

Figure 1: Henderson County Solid Waste Organics Programs



## METHODOLOGY

### Compost Bin Sale

Henderson County staff organized an online pre-sale in March and April 2021 with four pick-up locations in May. Due to the volume of customers already at the Transfer Station, staff decided to test multiple off-site pickup locations at three farmers markets and one community event. The type of compost bin sold, the The Earth Machine, was selected based on recommendations from the North Carolina Extension Solid Waste Specialist, Rhonda Sherman, and performance at the North Carolina State University’s compost lab. Two proposals for bins were received and selected based on the lowest price. The compost bin company hosted the website for the sale and included bins, aerators, rodent screens and collection pails. The sale was advertised on the County’s website and a local marketing firm was hired to promote the pre-sale via Google and Facebook ads. Over those two months, 365 compost bins were sold during the pre-sale.

### Volunteer program

Ten volunteers were selected to help study the local impacts of backyard composting and were given The Earth Machine compost bin, luggage scale, collection pail, study instructions (see figure 2), and resources. The volunteers committed to providing at least four weeks of data in exchange for the free compost bin. They were also invited to a virtual training on the basics of backyard composting and details about the study. Out of the ten volunteers, six submitted at least four weeks of data, one submitted two weeks, and two did not participate.

Figure 2: Volunteer Instructions

**2021 Henderson County Compost Volunteer Program** 

- Step 1 – Collect**  
Collect compost in the provided bin at home for a week
- Step 2 - Weigh**  
Weigh compost with the luggage scale
- Step 3 - Report**  
Report weights to the online survey
- Step 4 – Compost!**  
Add food waste to compost bin, don't forget leaves or mulch!

  
SCAN ME



## OPPORTUNITIES AND RISKS

Henderson County staff experienced multiple challenges during the first sale. First, staff decided to subsidize the bins for residents. The wholesale price was \$49.95, but the bins were sold for \$25.00. The goal was to sell at least 150 compost bins and provide \$3,750 in County funds to stay within budget. Due to the success of the marketing campaign and underestimate of residential interest, the goal was exceeded by 215 bins, causing the County to almost surpass a North Carolina local government procurement threshold of \$5,000. If the threshold had been surpassed, the original procurement method would have been invalid and a different procurement method would have been required.



Secondly, staff experienced delivery delays due to COVID-19 and the transportation of the bins to each pick-up location was harder than expected. The original plan was to load the bins on the County's box truck with the skid steer. Unfortunately, the stacked bins were too tall and had to be loaded on their side by hand. It was also challenging unloading the bins at the event. Finally, two of the volunteers that participated did not finish because their HOA regulations.

## THE SOLUTION

For the next sale, staff will advertise a certain number of bins at \$25.00 and then all other sold after that limit will be \$49.95 to cover the cost. Secondly, staff will consider renting a moving van with a taller clearance so that the pallets can be easily loaded, as well as ensure all farmer market locations are at the end of the line to distribute the bins directly out of the truck. Staff is also considering eliminating the off-site pick-up locations and just host at the Transfer Station. However, the amount of traffic at the Transfer Station and limited staff capacity is still a major concern for the compost bin sale. Staff are exploring other County property for the bins to be stored and distributed. Finally, staff is considering purchasing a bulk number of bins to sell throughout the year instead of hosting a seasonal event. For the next volunteer study, staff will ask each volunteer to obtain permission from their HOA before giving them the materials.

## THE BENEFITS

Although there were challenges, the first compost bin sale was an overall success. The off-site pick-up locations required more labor but provided a great location to provide outreach safely. The first pick-up was during the first annual Environmental, Agriculture and Compost Fair, where eight organizations, including the Cooperative Extension, Bee City Hendersonville, and North Carolina State Parks, tabled alongside the County. 188 Henderson County residents attended the event to pick up their compost bins and also had the opportunity to learn about pollinators, wildlife, and gardening in regards to composting. The farmers markets were also great locations to hand out the County's new compost brochure, Cooperative Extension compost publications, and gather over 80 contacts for a waitlist for the next sale.



Finally, the data from the volunteer study proves the program was worth the effort. **According to the volunteers, the average Henderson County resident generates about 3.48 pounds of compostable material per week that can be processed at home.** This equates to about 167 pounds/year/resident. According to this estimate, the 2021 compost bin sale will divert an estimated 30.5 tons (60,969 lbs) of material from the landfill each year. **The average cost to haul and dispose MSW and C&D to South Carolina ranges from \$35 - 40/ton, therefore, the 2021 Spring sale saved the County about \$1,143 in disposal costs.** If all of the 117,417 residents composted in their backyard, the County could save about \$3,581,218 annually in hauling and disposal to South Carolina. This number also excludes the other material that can be composted at a large-scale compost facility.