

Recyclable Material Processing Capacity Analysis

Purpose

Evaluate existing capacity for processing recovered materials. Through this analysis, R3Source will determine if there is adequate processing capacity and, if not what R3Source can do to facilitate obtaining capacity.

Overview

Currently, about 19% of the commercial and residential tonnage recycled is recycled locally by Rumpke Recycling, primarily at their Material Recovery Facility in St. Bernard. Other large quantity recycling operations include several large paper and metal recyclers. Hamilton County has adequate processing capacity for single stream recyclables, cardboard, and yard trimmings. Hamilton County is lacking in processing capacity for food scraps.

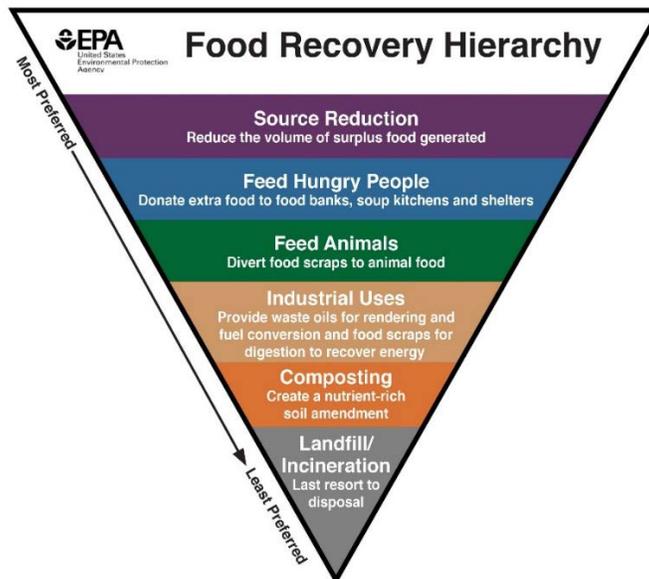
Single-Stream Recycling Capacity

Rumpke’s Material Recovery Facility in St. Bernard with the current recycling stream has the capacity to process from 16,000 to 18,000 tons per month depending on staffing. Currently, the facility processes approximately 14,000 to 15,000 tons per month, so they have the potential to increase by 3,000 to 4,000 more per month. In addition, Rumpke has several other material recovery facilities in the region and just announced a new facility investment in Columbus, Ohio.

Food Scrap Processing Capacity

According to the Waste Composition Analysis, food scraps make up approximately 10% of the waste stream and represent the largest waste stream landfilled in Hamilton County. To address this waste stream R3Source has focused heavily on the first two tiers of the US EPA Food Recovery Hierarchy: food waste reduction and food rescue to feed hungry people. Figure 1 demonstrates the hierarchy.

Figure 1: US EPA Food Recovery Hierarchy



Food Waste Reduction and Food Rescue

R3Source provides technical assistance and sometimes funding to organizations looking to reduce food waste. This assistance is analyzed further in the Business Analysis under Let’s Stop Waste and the Smart Kitchen Initiative. R3Source has also invested heavily in residential food waste reduction campaigns.

Hamilton County has many food recovery organizations that provide an unconventional processing outlet in that they rescue edible food to feed hungry people. R3Source supports these organizations through grants and professional development opportunities. Dozens of food rescue operations including pantries and soup kitchens process rescued food in Hamilton County. Some of the larger operations include:

- The Freestore Foodbank operates the largest by volume food donation and rescue operation in Hamilton County. As a Feeding America affiliate, they serve other Feeding America affiliate organizations and act as a central hub for large scale donations by distributing that food to their partners.
- La Soupe is an organization accepting food donations from groceries and farms that transforms the food into a more easily consumable form such as soups or smoothies. La Soupe distributes food to partner agencies and organizations that feed people in need.
- Last Mile Food Rescue rescues food from groceries and other organizations and uses an app to connect volunteers to deliver the food to organizations in need.

Hamilton County has one known hauler specializing in food rescue to feed animals, Organix, but several farms and food processors have direct-to-farm arrangements for food scraps as well.

Composting

While Hamilton County hosts 12 registered composting facilities, only one of those, Findlay Market, is registered as a Class 2 facility that can accept food scraps. Findlay Market accepts almost exclusively food scraps from their own operations with a small recently added program for residents in the area. Nine of the 11 yard trimmings composting facilities are operated by communities for their own leaves and brush while the other two are commercially operated facilities. In addition, several yard trimmings composting facilities operate in surrounding counties.

The closest registered composting facility accepting food scraps is 60 minutes away at the Garrick LLC Paygro facility in South Charleston. Some Hamilton County food scraps go to the Class 2 composting facility at the London Correctional Institution in London, Ohio about 80 minutes from the center of Hamilton County. Table 1 lists the Ohio EPA registered composting facilities in Hamilton County and the Class 2 and 3 facilities within a 30-minute drive

Facility Name	County	Facility Type
Amberley Village	Hamilton	Class 4
Brausch Farms	Warren	Class 2
Bzak Landscaping Inc	Clermont	Class 3
City of Springdale	Hamilton	Class 4
City of Wyoming	Hamilton	Class 4
Columbia Township	Hamilton	Class 4
Evans Landscaping Inc	Hamilton	Class 4
Village of Fairfax	Hamilton	Class 4
Findlay Market	Hamilton	Class 2
Village of Glendale	Hamilton	Class 4
Granny's Garden School	Hamilton	Class 4
Irvine Wood Recovery	Clermont	Class 3
H Hafner & Sons Inc	Hamilton	Class 4
Malena Organic Compost	Warren	Class 3
NPK Compost Facility	Hamilton	Class 4
City of Reading	Hamilton	Class 4
Sycamore Township	Hamilton	Class 4
Village of Greenhills	Hamilton	Class 4

outside of Hamilton County. Class 4 compost facilities accept yard trimmings, Class 3 accept yard trimmings and animal manure, and Class 2 can accept food scraps, yard trimmings, and animal manure.

As a result of this lack of close food scrap composting infrastructure, R3Source has worked with local organizations and businesses to foster the small-scale composting infrastructure in Hamilton County over the last few years. Small-scale composting operations, under 500 square feet, do not require registration with Ohio EPA and can be operated at a relatively low cost. Several of these small-scale operations have started over the last few years and provide a needed service for the start-up businesses collecting food scraps as well as beneficial soil amendment to local community gardens and farms.

Despite the growth in small-scale operations and the focus on food recovery, R3Source still sees a gap in processing capacity for food scraps. Without a large-scale composting facility located closer to Hamilton County or more smaller scale composting facilities, R3Source will never be able to divert a significant portion of the food scraps. A closer facility would lower the cost of collection and transportation while keeping the operation local.

Carboard Recycling Capacity

Businesses and residents can recycle cardboard with any single-stream program. Many local and regional processors accept this valuable material stream including:

- 3R Recycling
- Cincinnati Paperboard
- Donco Recycling Solutions
- Hanna Paper Recycling
- Montgomery Paper Co.
- King Hauling LLC.
- Northstar Recycling
- Rumpke Recycling
- Recycling Express
- Recycling Group Ltd
- Republic Services
- Royal Paper Stock
- Tri-State Cardboard

Plastic Film Recycling Capacity

Plastic Film makes up between 5% and 6% of the waste stream and represents the third largest single material stream entering the landfill after food scraps and cardboard (see Waste Composition Analysis). Although a half-dozen outlets exist that accept plastic film for recycling, this film usually needs to be clean, dry, and bailed. Local processors of plastic film include:

- 3R Recycling
- Cohen Recycling
- Customized Recycling Programs
- Eco Development
- Recycling Express
- Royal Paper Stock

For residents, many stores include Kroger, Walmart, and Target take plastic bags and other film for recycling.

Food Waste Processing Capacity Gap Solutions

1. Support small businesses to build local processing capacity.
 - Work with local business incubators to fund innovation in creating a value-added product using edible food streams that would have become waste. This has been successful in other cities. Local incubators include Fly Wheel, Centrifuse, Ready Cincinnati, and Mortar.

2. Support small-scale composting efforts. One of the barriers to small-scale composting is identifying feasible sites willing to host an under 500 square foot operation.
 - Fund a position at a partner organization, like the Civic Garden Center, that would find local garden sites and farm sites as well as help maintain those sites.
 - Create a program that supplies the materials and compensates the property owner for the use of their site.
 - Start a professional development grant for local small-scale composters and community personnel to cover the costs of training. Building knowledge of best practices in composting and other food scrap processing technologies will benefit local communities and businesses while moving Hamilton County’s processing capacity forward.

3. Create a public-private partnership to attract a food scrap processing facility.
 - Partner with facilities already registered as a Class 3 or 4 facility to understand capacity of moving to a Class 2 registration.

Summary

Hamilton County currently has sufficient processing capacity for the single-stream, cardboard, and plastic film streams. Should the single-stream materials increase more than 4,000 tons per month and exceed Rumpke Recycling’s current capacity, other material recovery facilities in the region could be utilized.

The primary stream that is lacking sufficient processing capacity in Hamilton County and throughout Southwest Ohio remains food scraps and in particular, non-edible food scraps. R3Source should continue to support existing food rescue and local small-scale composting operations while also encouraging residents and businesses to reduce wasted food. Even with that capacity, inedible food scraps will require alternative capacity.

Table 1. Summary of Potential R3Source Actions to Address Identified Gaps

		Infrastructure Improvement Suggestions	Gap Addressed	R3Source Program
Food Scrap Processing	1	Support small businesses to build local processing capacity	Lack of existing food upcycling businesses	Partner with local incubator to fund new upcycling food-based businesses
	2	Support small-scale composting efforts	Small-scale composters face unique challenges and are still early in development	Fund a position at a partner organization to support small-scale composting
				Provide supplies and materials
3	Create a public-private partnership to attract a food scrap processing facility	No local or regional large-scale food scrap processing	Work with a local registered composting facilities	

