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CENTER FOR THE CIRCULAR ECONOMY

COMPOSTING CONSORTIUM

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Building Zero Waste Communities

# HOW ORGANICS DIVERSION CAN HELP ACHIEVE ZERO WASTE GOALS

## A BLUEPRINT FOR SCALING COLLECTION AND COMPOSTING INFRASTRUCTURE

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Source: Envanto

# About the Center for the Circular Economy at Closed Loop Partners

## About Closed Loop Partners

Closed Loop Partners is a firm at the forefront of building the circular economy. The company is comprised of three key business segments. Closed Loop Capital Management manages venture capital, buyout and catalytic private credit investment strategies on behalf of global corporations, financial institutions and family offices. Closed Loop Builders is an operating group that incubates, builds and scales circular economy infrastructure and services. The Center for the Circular Economy ('the Center') is the innovation arm of Closed Loop Partners. The Center executes research and analytics, unites organizations to tackle complex material challenges and implement systemic change that advances the circular economy. The Center's expertise spans circularity across the full lifecycle of materials, connecting upstream innovation to downstream recovery infrastructure and end markets. For more information, please visit www.closedlooppartners.com.

## About the Composting Consortium

The Composting Consortium, managed by the Center for the Circular Economy at Closed Loop Partners, is a multi-year industry collaboration on a mission to build a world where organics are kept in circulation. The Consortium advances composting infrastructure and the recovery and processing of food-contact compostable packaging and food scraps in the U.S., to reduce food waste and mitigate climate impact.

The Consortium brings together leading voices across the composting and compostable packaging value chain—from the world's leading brands to best-in-class composters running the operations on the ground. Through in-market tests, deep research and industry-wide collaboration, the Consortium is laying the groundwork for a more robust, resilient composting system that can keep food waste and compostable packaging in circulation.

## About Eco-Cycle

Eco-Cycle is one of the largest and oldest nonprofit recyclers and Zero Waste pioneers in the nation. Their mission is to innovate, implement and advocate for local and global Zero Waste solutions to foster a more sustainable, equitable and climate-resilient future. To advance this mission, Eco-Cycle's primary business activities include operating the Boulder County Recycling Center, which receives residential and commercial curbside recyclables collected in Boulder County; providing recycling, compost and "hard-to-recycle" material collections and consulting to more than 800 businesses in Boulder County; and creating new recycling opportunities through the Center for Hard-to-Recycle Materials, or "CHaRM," the first facility of its kind.

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COMPOSTING CONSORTIUM

# INTRODUCTION

# Introduction





Forty percent of what we throw away in the United States is food. According to the Environmental Protection Agency (EPA), that accounts for 170 million metric tons of greenhouse emissions annually, equivalent to the emissions from over 35 million cars on the road per year. In the landfill, food scraps account for 58% of methane emissions released to the atmosphere from municipal solid waste (MSW) landfills, according to EPA estimates.

However, these food scraps are not waste. Kept out of landfill, edible food and food scraps are immensely valuable and can be donated, upcycled into new products (e.g., animal feed), recycled into valuable nutrient-rich compost and other soil amendments, or converted into biogas through anaerobic digestion. The EPA's Wasted Food Scale (see right) outlines end-of-life options for wasted food on a "most preferred" to "least preferred" basis. As shown in the scale, composting is the preferred end-of-life option for food scraps if they cannot be used for consumption (or left unharvested). Local governments have the opportunity to capture this food and process it properly, giving their residents and communities access to organics collection programs, in addition to waste and recycling collection. **This Blueprint, co-created by the Composting Consortium and Eco-Cycle, is crafted to educate and support municipalities in developing and scaling food scraps collection programs and composting infrastructure in their cities and jurisdictions.** Municipalities are a critical stakeholder when building the necessary compost infrastructure and promoting the behavior changes needed for a thriving circular economy for food scraps, particularly for complex organic streams that include post-consumer source separated organics.

**This Blueprint explores key considerations and provides resources, tools and guidance for municipalities looking to establish organics recycling collection programs in their communities and jurisdictions.**


Source: US EPA, 2023

We begin by outlining the role that state and local legislation and regulations play in shaping effective program design. We then delve into collection and infrastructure, from incentives for program success, to the myriad of collections programs, to key considerations for hauling and processing infrastructure. Following that, we uncover the importance of well-defined contracts with haulers and composters to promote strong vendor relationships, efficient service and clean organic streams. Finally, we emphasize the crucial role of clear communication and resident engagement in ensuring program success.

By following this comprehensive, multi-pronged approach, municipalities can establish effective organics recycling programs that divert organic materials from landfills, reduce greenhouse gas emissions, and create a more circular economy for their citizens and communities.

## Where Should I Start?

When building an organics collection program, it is best to start small and build up to a bigger program to get residents accustomed to the transition and allow operations to scale up to service the entire community. Every municipality will start at a different point; however, the path forward is somewhat linear. First, determine where you are in your program's development stage to help navigate which aspects of this Blueprint to prioritize. **See Figure 1 and 2 for guidance on how to use this Municipal Blueprint.**

Source: Envanto

**FIGURE 1. EXPLORE THE CHAPTERS IN THIS BLUEPRINT FOR IMPLEMENTATION TOOLS YOU CAN USE**

## Navigating Policy

CHAPTER 1

Policy is an important driver for change. For example, local ordinances and zoning can make programs possible.

## Scaling Collection & Infrastructure

CHAPTER 2

How you collect and process your food scraps matters. This chapter walks through programmatic options, best practices for processing and more.

## Developing Contracts with Service Providers

CHAPTER 3

Contracts need to be executed to work with an outside vendor for collection or processing. The content of that contract will set up your program for success.

## Rolling Out Communications & Engagement

CHAPTER 4

To motivate residents to participate and minimize contamination, communication and education are key.

**FIGURE 2. TYPICAL GROWTH OF AN ORGANICS PROGRAM FROM BASIC YARD WASTE TO FULL-SCALE**

## Leaf Curbside Collection

Start establishing a curbside leaf collection program for your residents.

KEY CHAPTERS

2

## Backyard Composting Assistance

Smaller municipalities with a more conservative budget can support residents through guidance and/or tools to compost in their backyard.

KEY CHAPTERS

1

## Food Scraps Drop Off

Now you can start to add food scraps to your program. To start small, allow residents to drop off their compost at locations throughout your community or at the compost site itself.

KEY CHAPTERS

1 2

## Food Scraps Curbside Collection Pilot

Once your organics drop-off program is successful, you can pilot a food scrap curbside collection program then scale up to service the whole community.

KEY CHAPTERS

2 3

## Food Scraps Curbside Collection Expansion

Take learnings from the pilot program to expand your organics program to service residents through curbside collection.

KEY CHAPTERS

2 3

## Contamination Control

Once your program is fully developed, ongoing resident education and service will be your priority. Reducing contamination is key to a healthy compost pile and program.

KEY CHAPTERS

4

## Step 1: Make a Plan

Now that you've chosen a starting point, it is time to get funding for the next step in your program's development. First, leadership buy-in is paramount. Draft a memo outlining your vision, impact, timelines, staffing needs and an operational plan including all capital and operational requests. The US Composting Council's (USCC) Target Organics Hub has several resources to help you build out a strategy and project scope. Be clear on your program vision, impact and plan to fund this new project, including the why, the how and the potential return on investment. Two frequently used pathways for funding are:

1. **Requesting new funding** in your annual budget cycle
2. **Applying for grants**

### Seeking funding for your food scraps collection program?

The Grants Database, compiled by NRDC and ReFED, lists federal grants that could be a perfect fit.

## Tips for Creating Your Elevator Pitch for an Organics Program

When advocating for the program, here are some facts about compost and composting to help make your case to various audiences:

**Local Green Jobs:** Producing and using compost sustains 5x more jobs than landfilling yard debris and food scraps. Nationwide, for every 1 million tons of food scraps and yard trimmings converted into compost and used locally, composting can create 1,400 new jobs. Compost can be produced and used locally in urban and rural areas to provide local economic, environmental and agricultural benefits.

**Climate and Environment:** Recycling and composting are the two most cost-effective climate change solutions in which local governments can invest. Composting diverts organic material away from landfills—where they degrade anaerobically, creating methane, a potent greenhouse gas. Further, applying compost to soil draws carbon dioxide out of the atmosphere and sequesters it in the ground. Soils can store three times more carbon than plants.

**Local Resiliency:** Additionally, compost can dramatically increase soil's water-holding capacity, helping make your state and community more resilient to drought and flooding.

**Soil Health & Agricultural Benefits:** Composting programs provide a local, affordable supply of finished compost for gardeners and farmers. Applying finished compost to landscapes helps restore lost topsoil and grow more nutrient-dense food and crops.

**Prolongs Useful Landfill Life:** The U.S. generates nearly 100 million tons of food and yard "waste" every year, much of which is sent to landfills. Diverting those materials to composting facilities saves taxpayers money by prolonging the lifespan of landfills and creates valuable soil amendments in the form of compost and other products that build soil health.

## Step 2: Implementation Tools

Once leadership support is secured, it is time to implement. There are various levers to pull to help shape and evolve your program. The rest of the Blueprint explains best practices for each type of program and provides examples from other municipalities across the United States to help you get started.

## Step 3: Encourage Engagement

Programming that involves community outreach—such as support for backyard composting, composting programs at schools and multi family housing complexes and food scraps drop-off at farmers markets—engages core groups of residents who can become the base supporters for expanding programs and adopting policies. In many places, programming precedes policy, though in some states, local programming may be precipitated by state-level policies requiring action at the local level. Starting small through programs and pilots helps to identify barriers to and opportunities for organics diversion and allows your staff and core supporters time to work out any kinks in the proposed system. It also provides time for those core supporters to encourage others to get involved in composting. While programmatic and policy approaches can work very successfully in tandem, there is also overlap with infrastructure and community engagement.

### *Supporting Residents Across Different Organics Programs*

#### 1. Backyard Composting

When residents compost their own organic materials, they are tied to the process and can directly see the benefit of keeping streams clean. Understanding the impact of composting also reinforces the importance of other waste reduction efforts and helps encourage residents to advocate for waste reduction and diversion programs, including expanding access to organics diversion for residents and businesses that can't compost onsite. Local governments can support backyard composting relatively inexpensively by sharing education materials through web pages like Howard County, Maryland, in newsletters or social media, providing low or at-cost compost bins, hosting events, or partnering with local garden groups or university extension programs that educate about composting.

Denver's office of Climate Action, Sustainability & Resiliency partners with nonprofit Denver Urban Gardens to educate the community about the value and process for composting. This video provides tips on the whole process of backyard composting. "Leave the Leaves" campaigns are one of the easiest ways jurisdictions can support residential organics diversion. Find free social media and education resources at Xerces.org and Bee City USA.

#### 2. School-Based Composting

Composting in schools not only reduces waste that schools have to pay to landfill, it also provides hands-on education opportunities for youth to learn the importance of creating and using compost versus disposing of organic matter. For schools with gardens, students can participate in the full compost cycle by adding finished compost to the garden beds they tend. Local governments can support composting in schools by providing funds for the programs or by helping to leverage partnerships with school districts and school staff to implement programming. Cornell University and Grades of Green both have how-to guides for launching compost programs in schools and Eco-Cycle's free Zero Waste Schools Activity Guide provides free resources, curricula and activities for classrooms to involve students in waste reduction efforts including composting.

**3. Food Scraps Drop-off Programs**
Establishing drop-off sites is a cost-effective way for residents to dispose of food scraps, especially for smaller communities, and offers an easy entry point for establishing organics collection programs. A 2023 study by BioCycle found that 141 food scrap collection programs in the U.S. rely solely on drop-off locations. States like Vermont require drop-off stations be made available to residents, and states like Connecticut, Ohio and New York are increasingly using drop-off sites to expand access. The City of Boston launched a collections pilot in 2022, Project Oscar, which is still ongoing today and includes drop-off locations dispersed throughout the city in addition to curbside collection programs. Of note, 69% (117 out of 169) of drop-off programs in the U.S. accept food-contact compostable packaging, according to BioCycle.

**4. Zero Waste Stations at Community Events**
Establishing temporary stations at community events—like local farmer's markets, pop-ups or concerts—can be a great way to promote awareness and education around diverting food scraps and create a community atmosphere around composting. This approach requires careful coordination and advance planning, and may require an events team and volunteers depending on the scale and size of the event. As always, a combination of proper signage and volunteers/employees monitoring the bins is important to prevent contamination.

**5. Curbside Collection Programs**
A nationwide survey by BioCycle identified 230 curbside food scrap collection programs across 321 communities, serving over 8.2 million households in the U.S. These programs provide residents with dedicated bins for food scraps and yard waste, often collected alongside regular trash and recycling. The convenience of curbside collection makes it an attractive option for residents who are interested in composting. To present a compelling case to your leadership team about establishing and scaling curbside collection programs, track and measure participation over time to demonstrate program effectiveness. While initial investments in curbside collection vehicles, bins and signage are required, these programs can be cost-effective in the long run. Be prepared to make adjustments based on resident demographics and housing types (e.g., single-family homes vs. apartments) to optimize program efficiency.

**6. Commerical Collection Programs**
Commercial collection programs function similarly to residential curbside programs, but service larger generators like businesses, universities and institutions. Offering incentives, such as discounts on collection fees or rebates, may encourage businesses to participate and divert more food scraps from landfill disposal. Finding a hauler and compost manufacturer who can handle these larger volumes is crucial prior to implementation.

Source: Envanto

# CHAPTER 1.
# NAVIGATING POLICY

CHAPTER 1.

# Navigating Policy







This chapter of the Blueprint focuses on policies to divert organic materials from landfill. Policy approaches to materials management can be set at the state level through state bills or at the local (county or municipal) level through ordinances. Siting of organics diversion infrastructure can likewise be done at the state or local level through zoning or regulatory processes.

## Methodology

The information in this chapter is based on the collective experience of those on the Eco-Cycle team in working with jurisdictions to implement organics diversion programs over the past three decades. In addition to the team's direct experience, the examples below are supplemented with in-depth studies done by other organizations with expertise in policy and diversion. Web research and interviews with individuals and jurisdictions around the country that are running a variety of organics diversion programs were also conducted.

## What is an Ordinance?

Whether in a town, city or county, ordinances are local laws that require a vote by the local elected legislative body, such as a city council, town board or county commission. If a local government is pursuing a ban on organic material from landfills or setting up a new system to collect compostable materials from residents, it is more than likely an ordinance needs to be passed. Ordinances can be used to amend existing local laws or create new local laws. Their adoption can be driven by local desire for a law or to comply with a state law requiring local policy action.

## Sections of an Ordinance

Work with your jurisdiction's attorney's office to write the specific ordinance that will fit within state and local codes. Similar to a state law, the style of writing ordinances varies from jurisdiction to jurisdiction. However, they often include four main sections:

1. **Preamble, or statement of intent,** that says why the governing body is taking action and ends with a declaration of resolution, stating briefly what the ordinance will do. In the case of increasing organics diversion, statements of intent might include:

*"WHEREAS the County Commissioners/City Council of [County/City] find that organic materials including food scraps and yard trimmings are feedstock for creating compost, a valuable soil amendment that repairs soil health making soil more resilient to flood and drought…NOW, THEREFORE, BE IT RESOLVED BY THE, County Commissioners/City Council of [County/City] THAT organic material will be banned from landfills; staff*

*shall pursue a hauling contract; etc."*

2. **Definitions** clarifying the key words in the ordinance. If words have already been defined elsewhere in the jurisdiction's code or in state law, reference those definitions rather than redefine them. If you use the same word in another piece of legislation or code but need it to have a different meaning, clarify that for the purposes of the law, the word will have the meaning given by this definition. If the definition for the new law is preferable and would be better than the original definition in both instances, the new ordinance can be used to amend the existing definition. For example, if a previous law referred to "compostable packaging" but did not clarify that compostable packaging should only refer to packaging certified as compostable by an independent third party; the new ordinance language could amend the definition in the existing law to include that clarification.

3. **Sections (body)** of the ordinance describe in detail what the law requires, such as the materials targeted, services required, frequency of collection and designation of where materials must be processed (known as flow control).

4. **Enforcement** is laid out in a section of the ordinance. **The importance of including clear and practical enforcement mechanisms cannot be overstated.** Without enforcement mechanisms, which can and should include outreach and education about the law prior to any fines or other repercussions, even the best law will likely have weak implementation.

## Passing an Ordinance

There are three main steps to consider in developing a policy and building the support needed to pass it:

1. Understand the current system and its potential, the political landscape, and residential and commercial demographics and impacts;

2. Conduct stakeholder and community engagement;

3. Educate, educate, educate the community and decision makers (both staff and legislators) about the policy.

## Legislative Champions

Equally important are champions on the legislative body, the elected officials making the policy decision. **Staff can spend a lot of time and resources developing a policy, but without legislative champions, the policy has very little chance of passing and being approved.** Identifying a legislative champion early in the process is crucial to getting the proposal on meeting agendas and building support. The legislative champion(s) can help by using their position to be the public face of the policy and advocate for the policy from the government side; staff, on the other hand, usually cannot advocate for policy and must appear neutral. Legislative champions can provide strategy for how and when to bring the policy up for debate and a vote. They can be an ear to the ground on what other legislative members are thinking, and what information they need to give their support. Finally, the legislative champion(s) can ensure that the correct motions are made and can talk to their colleagues to garner the votes needed to get the policy passed.

## Adopt Waste Policies Through Elected Bodies, Rather Than Popular Vote

**Due to the complex nature of waste management, it is advised not to take the decision-making to a popular vote.** While stakeholder engagement is crucial to the success of any organics management program or policy, ballot campaigns to expand organics programs tend to be unsuccessful due to unintentional misinformation caused by the complexity of topics and/or intentional misinformation from residents who do not want government interfering with their waste/recycling/compostable materials or who do not want processing facilities located near them.

## Ordinance Targets and Types

Ordinances can be used by local governments to modify zoning codes, institute organics recycling practices within certain sectors in a jurisdiction (e.g., residential and commercial sector) and establish compost procurement requirements.

### 1. Zoning Ordinance

Zoning is how local governments designate uses for different types of land or parts of their community. Many jurisdictions have no definition of composting or specific guidance for siting a compost operation in their zoning code. As a result, proposals to site a compost operation of any size often face default classifications that do not fit and require special reviews that are unnecessarily challenging. The US Composting Council has developed Model Zoning Template & Guidelines that clarifies the path for a proposed composting site. This guide can be used to draft a model ordinance that then must be passed by a local government's legislative body.

Siting a new commercial composting facility may not always require first changing the local zoning code, since larger projects often trigger a special review requirement. However, especially in areas where siting a single, large composting facility may face public opposition, clarifying which zones can manage each level of composting—from backyard to on-farm, to commercial and industrial—is a helpful first step toward incentivizing a more distributed composting system in which multiple sectors play a part, and potentially reduce the need for a single large facility. Read more about distributed composting in the *Scaling Collection & Infrastructure chapter.*

### 2. Commercial Waste Generator Ordinance

Commercial waste generator ordinances generally require commercial entities to have recycling and compost services. Generators are commonly defined by business size, based on square footage and/or by the number of employees. Organics compliance laws either specify businesses generating certain tonnages, like New York's Food Donation And Food Scraps Recycling Law, or call out business types that generate large amounts of organic materials like food processors, wholesalers, distributors, manufacturers, grocery stores, restaurants, events and hospitality venues. Start with businesses that generate the most tons of food scraps through employee-controlled activities such as food preparation, processing or stocking. This diverts large, relatively clean quantities of food scraps by allowing businesses to develop their source separation systems and educating employees.

### 3. Universal Zero Waste Ordinance/Universal Recycling Ordinance

Universal Zero Waste Ordinances or Universal Recycling Ordinances (UZWO/UROs) are policies that require recycling and/or composting services at specific locations. UZWO/UROs can apply to commercial entities, multi family complexes, single family residences, events requiring permits or any combination of those sectors. Variations may require that businesses or property owners subscribe only to recycling or may include requirements for compost services. The ordinances may phase in different types of property owners over time.

**The main benefits of UZWO/UROs are that they can significantly increase diversion of both recyclables and organic materials from landfills. They level the playing field so that property owners who want to recycle or compost are not paying more than those that only subscribe to trash services.** By passing one UZWO/URO, the municipality sets a cohesive goal and approach for behavior change across the community rather than having to address diversion practices in different sectors at different times. Even if the UZWO/URO is set to phase in for different generators at different times, doing so through one ordinance facilitates planning, outreach and rollout of the program.

The breadth of the approach a jurisdiction takes will likely be based on the capacity of the jurisdiction's staff and existing service providers, what recycling and composting programs are already in place, how familiar residents and businesses are with recycling and composting practices, and other local considerations. If few or no programs exist for diversion in your area, it is recommended to start gradually phasing in requirements to help residents, businesses and haulers/processors build the systems and practices necessary for success.

Just as there is variation in the terms of the ordinances, what these types of ordinances are called also varies from place to place. For the purposes of this Blueprint, all ordinances that could fall into this category are generically referred to as "UZWO/URO" unless referencing a specific community's ordinance. Considerations for the various approaches are provided on the next page.

## Model Municipal Ordinances Published by Environmental Law Institute (ELI) & Natural Resources Defense Council (NRDC):

1. Model Municipal Zoning Ordinance on Community Composting: With and Without Commentaries

2. Model Ordinance on Mandatory Reporting for Large Food Waste Generators: With and Without Commentaries

3. Model Compost Procurement Policy: With and Without Commentaries

4. Model Executive Order on Municipal Leadership on Food Waste Reduction: With and Without Commentaries

5. Model Ordinance Establishing a Pay-As-You-Throw Program for Residential Municipal Solid Waste: With and Without Commentaries

## Ordinance Best Practices

General best practices for UZWO/URO policies and other ordinances are discussed below.

### 1. General Best Practices

**When possible, combine UZWO/UROs with hauling contracts for hauler efficiency and customer rate protections.** A downside of an UZWO/URO ordinance on its own is that simply requiring customers to have hauling services can drive up costs. In areas where laws allow, adopting an UZWO/URO alongside implementing a hauling contractor or other organized hauling approach can provide efficiencies for haulers that allow for lower costs for customers. Contracts can also protect customers from price fluctuations *see Developing Contracts with Servivce Providers chapter*. In some areas, the jurisdiction is not legally allowed or politically advised to create contracts or organize hauler contracts for all sectors. For example, in Colorado, municipalities are legally barred from requiring commercial businesses to enter specific waste hauling contracts. Another example is if Homeowners Associations (HOAs) already contract for hauling services and do not want to be wrapped into a municipal contract or program. In those situations, adopting an UZWO/URO ensures that residents and businesses have the same access to recycling and composting services that are available to those covered by the municipal contract or program.

**Require businesses/property owners to subscribe to services, rather than require haulers to bundle recycling and/or composting with trash services (unless state law directs the latter).** Ordinances that require haulers to offer recycling and/or composting along with trash collection services disadvantage haulers that specialize in recycling and/or compost hauling, potentially leading to monopolies of a few larger waste haulers that may or may not be committed to high-quality, low-contamination streams. Haulers that specialize in recycling and/or composting generally provide more customer education to ensure reduced contamination in streams.

**Start with requiring single stream recycling before composting services:** UZWO/UROs often require recycling services first as an entry-level practice, as recycling is a more universal and better understood concept. The community can become educated as to the “how” and “why” around properly sorting their discards and diverting material from the landfill, creating a springboard for implementing compost programs.

**Pilot the program at a representative sample of businesses or residences.** Pilot programs allow the haulers and jurisdiction to see firsthand what challenges are likely to occur and to develop solutions for them. Pilots work best when they reflect the makeup of the full area the program will eventually serve. For example, if the jurisdiction has a lot of multi family complexes (MFC), the pilot should include at least one MFC. Starting small and being transparent about the process, and the challenges, solutions and successes, enables residents and businesses who are hesitant to join the program to see the benefits and how easily composting can be done. A pilot also can help test what types of messaging resonate with various populations within the jurisdiction. Program trials may also inform what bins or equipment work best for the full program before investing in enough infrastructure to cover the full jurisdiction.

**Phase in compliance based on size and type of generator:** When phasing in compliance for generators, two approaches are most common: start with back-of-house, large commercial generators, or start with single family residential generators.

Source: Envanto

**Single-family residential:** Starting with single family homes drives individual behavior change because residents and families directly experience how much of their waste can be diverted through organics collections. Starting at the residential level also allows for more targeted and quicker feedback to correct contamination issues. Rejecting or tagging a cart for contamination, particularly when paired with messaging about the "why" through email messages or the tags themselves, will help program participants correct separation behavior and reduce contamination.

**Large generators:** Focusing on large organic waste generators, like grocery stores and corporate cafeterias, can be most efficient in areas with many large businesses and/or mandatory organics diversion. This approach diverts the most organic material with the fewest entities needing to comply. Contamination control must be built into program design given the number of employees involved. Reduction relies on identifying common contaminants to determine their sources (for example, rubber gloves discarded by food prep or janitorial staff, versus plastic cups discarded by customers) and conducting continuous education efforts with staff and customers.

## 2. Best Practices for Universal Zero Waste Ordinances

Successful enforcement of UZWOs begins with outreach to affected businesses and property owners during ordinance development and implementation. The ordinance should be clear on what is meant by compliance and should have mechanisms in place to monitor and enforce the program in a way that develops desired diversion behaviors and clean recycling and composting streams. Compliance enforcement is often the purview of code enforcement agents, with educational assistance from sustainability staff. Key compliance elements include:

- The property owner should provide the correct size and number of bins with appropriate frequency of pickups for materials generated by the residents or businesses. The bins should be easily accessible by tenants, preferably right next to trash receptacles.

- For commercial and multi-family properties, bins should be clearly identified as to whether they are for recycling, trash or compost. Clear signage must be located above bins identifying what materials go in each bin. Regular communications

and training for employees and tenants should be provided regarding how to properly discard materials *see Rolling Out Communications & Engagement chapter.*

- There should be a designated person whom a hauler can contact if there is a problem with the bins or materials in them, and a clearly defined process to deal with that issue. Processes could include the property owner being responsible for removing any contamination before the bin is picked up; the hauler might remove the contamination and charge the property owner a fine, or the bin might be collected and hauled to the landfill as contaminated with a fine to the customer.

- The ordinance should include fines for noncompliance; however, those fines should only go into effect after outreach to ensure property owners understand the ordinance and any barriers to compliance have been addressed.

- The jurisdiction should develop a system where residents, employees and customers can report noncompliance issues to reduce the burden on staff of identifying issues.

### 3. Best Practices for Commercial Generators

**Allow businesses to successfully comply with back-of-house (customer-facing) capture.** Most food scraps in a commercial business are generated in back-of-house (i.e., kitchen, food storage/prep area, etc.) and contamination can be most easily minimized by creating systems for organics diversion and education for employees. Staff can be trained to monitor and eliminate contamination in back-of-house bins. Front-of-house, customer-facing compost bin access should start off as optional and be ramped up over time. **Elements that can reduce contamination in front-of-house collections include:**

- Purchasing or procurement practices that reduce common contaminants, such as switching to reusable service ware or purchasing certified compostable products (if the local composter accepts them) and avoiding the purchase of look-alike, fake compostable products.

- Clearly labeled collection bins to identify which items go in landfill, compost and recycling bins and how to recycle/compost correctly (i.e., separate food scraps from recyclable aluminum, etc.). Signage should include pictures of actual food/products sold in the commercial space.

- Public education and residential composting programs in place to create positive composting behaviors.

**Landscaping companies may need additional time to comply.** Though yard trimmings, including tree branches, can be a relatively uncontaminated organics stream, most ordinances that call out businesses that produce excessive yard trimmings (e.g., landscaping companies) allow for them to comply a year or two after the largest food scraps generators. Many landscaping companies are smaller, mobile businesses that operate in multiple municipalities rather than having a brick-and-mortar location and there may be language barriers that require more time to address. In areas where landfilling is less expensive than composting, landscapers may need to be informed of where to haul organic materials as they transition away from disposal. Extra time for compliance allows for jurisdictions to do additional outreach and education to these small businesses.

### 4. Best Practices for Public Events Ordinances

Some, though not all, UZWO/UROs call out public events as needing to comply. The policy should require that, before event planners receive a license from the jurisdiction to put on an event, they must first provide a Zero Waste event plan. The plan should include requirements of vendors to use reusable, certified compostable and/or recyclable service ware, in compliance with local guidelines. Vendor participation in the event is contingent upon their adherence to specified requirements

outlined in written vendor agreements. Vendors must review a list of accepted materials for serving and distributing food before being granted approval, as well as sign an agreement pledging compliance with the requirements. Event management is responsible for furnishing clearly labeled Zero Waste bin systems designated for reusables, recycling and composting ("landfill" bins may also be supplied). It is recommended that these bins be overseen at the event by trained volunteers or staff acting as "Zero Waste Goalies" (staff or volunteers) at the point of disposal, guiding participants on proper material sorting.

Despite the assistance provided by Zero Waste Goalies, event staff should anticipate the need for post-event quality control by sorting through the bins. The Zero Waste plan should also require that event planners submit their achieved landfill diversion rate to the jurisdiction at the end of the event. The City of Steamboat Springs, Colorado supports the reduction of waste at events by offering technical assistance to any planner of an event that needs a permit. The city also provides tiered financial incentives to events that meet certain requirements, including plastic reduction and having Zero Waste Goalies to monitor trash/recycling/compost stations. Denver, Colorado, Sec. 48-138 requires permitted events to provide recycling and organics collection to employees, contractors and customers, and outlines requirements for bin placement and signage.

## 5. Best Practices for Residential-Focused Ordinances

### Multi Family Complex Ordinances

Residential composting programs are most successful with jurisdictional support and community outreach to help participants understand what to compost and what to leave out. Requiring multi family complexes (MFCs), apartments and condominiums to provide recycling and compost services to their residents can greatly expand these services to residents who often do not have access. While voluntary programs may start with smaller buildings, ordinances with unit specifications for MFC compliance typically start with properties that have 75 or more units; subsequent compliance triggers are for 50 unit and/or 25 unit buildings, then a final phase of MFCs up to 25 units. Successful implementation in MFCs requires deliberate and ongoing education as well as either controlled access to recycling and organics carts (such as locked bins or bucket programs) or processes for handling contamination, including a designated contact at the MFC that haulers can alert if there are issues. Starting pilot programs or voluntary opt-in programs with smaller buildings enable the jurisdiction and haulers to identify and work on challenges before larger scale implementation. Ordinances requiring MFC participation should build in time for haulers to expand capacity and for the hauler and jurisdiction to educate residents and property owners/managers to get buy-in and gain understanding of diversion behaviors. Education is particularly important in multi family housing complexes where multiple families are using the same carts to discard organics, making direct feedback about contamination more challenging.

### Organized Single Family Hauling Ordinances

To protect against cost inflation for residents, any ordinance that requires single family residences to have services should be paired with a municipally organized system for hauling services—either through contracting or municipally run fleets *see Developing Contracts chapter*.

While some jurisdictions can seek a hauling and/or processing contract without an ordinance, consult with the jurisdiction's attorney to see if a council vote is required. Some City Councils may choose to initiate the contracting process by ordinance to lend political weight to the elements that the council (hopefully through stakeholder work and public comment) considers vital to include in the Request for Proposal (RFP) and contract. This can be seen as

## Equal Space Allotment Code for Commercial & Multi Family Complexes

One of the biggest challenges to adding recycling and composting to multi family and commercial properties is a lack of space for bins or carts to collect the additional streams. Whether a municipality is looking to expand recycling and composting through a municipal hauling contract, UZWO/URO or landfill ban, forward-thinking jurisdictions should adopt equal space allotment codes that require space be set aside in new and remodeled MFC and commercial properties to allow for adequate bin space. Aspen, Colorado's Space Allotment for Trash and Recycling ordinance is a good example of actual ordinance language. Elk Grove, California provides detailed information about placement of bins of all types at residences, commercial and MFC properties while Ventura County, California has a much more concise description of bin space allotment.

an especially important step for the longevity of a program if the community engagement and priority setting has happened during the tenure of one council, and the RFP distribution will not happen until new council members are elected.

**Specific Considerations for Organized Single Family Hauling Ordinances:**

**Set requirements for Homeowners Association (HOA) contracts:** If the jurisdiction allows HOAs to opt out of the jurisdictional contract, the jurisdiction should adopt an ordinance requiring that HOAs either opt into the contract or provide waste, recycling and composting services at least equal to those provided in the jurisdictional contract. Fort Collins, Colorado's municipal code is a good example, requiring "group accounts" (including HOAs) to provide services consistent with municipal requirements for the municipal contract.

**Pass a resolution to direct staff to proceed with an RFP/contract for hauling:** The contents of this type of resolution will vary depending on the reason for requiring a resolution to proceed with the contracting process. If the resolution is deemed necessary by the municipal legal team, staff should be consulted for what wording needs to be included in the resolution. If the reason is to underscore stakeholder work leading up to the decision and/or demonstrate political will for the contract, the resolution should include the following (see the Ordinance Drafting section at the beginning of this chapter):

**Start with the declaration of reasoning for the resolution.** Reasons should reflect the goals motivating the community (e.g., equitable access for all residents to compost services, diversion of organic materials from landfills, implementing a powerful climate change solution, or other issues identified during the stakeholder process).

**Include elements of the contract identified as important to the future program.** These could include proposed service options (curbside and/or drop-off, opt-in or guaranteed service), service areas, focus on contamination reduction, etc. *See Developing Contracts chapter* for other best practice elements.

### 6. Best Practices for Compost Procurement, Soil Amendment Ordinances

Creating a procurement policy for compost use in parks, open spaces road construction and

landscaping establishes a guaranteed market, reducing a composting facility's risk associated with accepting materials from a new municipal collection program. The Natural Resources Defense Council (NRDC) created a Model Compost Procurement Ordinance that can be customized by the jurisdiction. California and Washington both have local jurisdiction compost procurement requirements as part of their comprehensive organics management laws, which may also serve as a model for local governments. An early lesson with these new laws is that long-term procurement success relies on producing quality compost that meets the needs of departments required to purchase it. Understanding those needs at the beginning of the planning process helps a jurisdiction commit not just to providing an end-market, but also to generating contamination-free organics streams.

A growing number of jurisdictions (including water districts) require compost to be added to new lawns at homes and other construction sites to improve water infiltration and moisture retention. For example, Denver Water requires compost application at a rate of four cubic yards of compost per 1,000 square feet of permeable area. Monitoring and enforcing this code relies on buy-in from the jurisdiction's planning and permitting department to enforce it prior to granting a certification of occupancy. Proof of compliance would likely depend on contractors showing a receipt for the required amount of compost procured as proof.

While not considered procurement, compost giveaways create enthusiasm for the value of finished compost and keeps the community connected to the full system without devaluing compost by making compost a free thing to "get rid of." Methods to make compost giveaways special include providing limited quantities for free to the community "while supplies last," connecting giveaways to special community events like Compost Awareness Week (the first week of May), and providing the free compost to entities people want to support like schools or community gardens. Jurisdictions should also consider selling finished compost at their recycling/compost drop off center or other locations in their community that make sense or partnering with local businesses to promote the sale of locally made finished compost.

## Landfill Organics Bans

Landfill bans or organics diversion requirements mandate that generators of designated feedstocks must divert that material from landfills. Organics diversion requirements are most common at the state level, though some municipalities have banned specific recyclable or compostable materials such as single stream recyclables, food scraps or yard trimming from being landfilled. Organics diversion requirements typically start with compliance requirements for commercial entities and are phased in, starting with the largest generators of food scraps and gradually adding generators of smaller sizes, sometimes down to residential compliance. Phasing sizes for compliance are typically based on tons of organic materials that are generated on average, per week or per year, starting with entities generating the highest volume of food scraps per year. Many state bans have a proximity clause stipulating that compliance is only required if an organics recycling facility is within "X miles from the food scraps generator." Diversion requirements typically also include options to donate edible food for human consumption or divert food as animal feed. The US Composting Council has a map of states and municipalities with organics bans, as of 2023.

NRDC created an in-depth report on best practices for organics requirements. The report provides state-specific details on the usefulness of different approaches to reducing food discards, including model ordinance language that could be adapted

and used at local levels. As with other ordinances, when considering a diversion requirement, it is important to understand what structures are in place to ensure that compliance is achievable and that it is not a "ban without a plan." For example, do existing haulers and processors have capacity to haul and process targeted materials. If they do not, does the ordinance allow sufficient time for businesses to ramp up capacity and/or is the jurisdiction prepared to build out collection and processing infrastructure.

**Examples of Municipalities with Model Organics Diversion Requirements and Resources:**

**Seattle, WA** adopted an ordinance in 2014 prohibiting food discards and compostable paper from landfills. The ban is coupled with compost service requirements, a municipal compost procurement ordinance, and other zero waste efforts to create a series of ordinances that support food scraps reduction and composting.

**Aspen, CO** adopted an ordinance in February 2023 that prohibits organic material from disposal in landfills as one of its strategies to reduce municipal greenhouse gas emissions and to help extend the life of the county-owned landfill. Food scraps must be donated for consumption by people or animals or recycled and sent to a composter. The city is working with restaurants to help train employees and design systems for successful composting and has created a user-friendly organics website that includes information about the ordinance, who to contact to learn more, information about all the ways to compost in the city, a downloadable graphic description of materials accepted in the program and tools for restaurants to comply with the ordinance.

**Austin, TX** adopted an organics diversion requirement in 2018 in conjunction with its Universal Recycling Ordinance. The ordinance requires all food-permitted businesses to:

- Submit an annual organics plan showing how the business meets diversion goals, including how they educate employees about organics diversion and show proof via invoice or contract of the size/number of organics containers they use and frequency of collection.

- Provide employees access to at least one method of organics diversion—donation, animal feed or composting via a licensed hauler. Step by step instructions on how to develop systems for each of those types of programs are provided by the city.

- Post bilingual signs that clearly identify what foods are acceptable. The city provides free composting posters in English and Spanish, Arabic, Korean, Mandarin and Vietnamese plus templates for businesses to make their own signs.

- Educate employees about food diversion programs. Businesses can access free tools and videos the city has created for employee education.

## Considering Adding Compostable Packaging to Your Program? Here's How Policy Can Help You Succeed.

State policies impact local composting efforts, particularly when it comes to managing compostable packaging in organics streams. Two key areas influenced by state-level decisions are labeling laws and Extended Producer Responsibility (EPR).

Comprehensive and clear labeling laws for compostable and non-compostable packaging can help keep organics streams clean by ridding the market of "look-alikes"; packaging that is not compostable but may be confused as compostable due to its appearance and design. These laws standardize specific design and labeling requirements for compostable packaging, often mandating the use of certain colors (green, brown) or techniques (striping, tinting) to clearly indicate compostability to consumers. To date, five U.S. states have adopted labeling laws, including California, Colorado, Maryland, Minnesota and Washington. Municipalities in states without labeling laws can still promote clear labeling by working with their communities and state representatives. Ultimately, the decision to include compostable packaging in a collections program will be determined by the local compost manufacturer's acceptance policy, but municipalities can create incentives to encourage composters to process these materials. It's important to maintain consistent communication with the downstream processor to ensure your community is producing clean streams (whether or not they include compostable packaging) that benefit the composting industry.

EPR makes producers (i.e., brands, packaging manufacturers) financially responsible for the collection and recycling of their packaging, and encourages companies to create packaging that is easy to recycle, compost and reuse. EPR programs, currently under development in states like California, Colorado, Maine, Minnesota and Oregon, have the potential to support composting infrastructure in the future. While the details of these programs are still being worked out, they hold promise for the composting industry, and could offer financial assistance for municipalities looking to bolster funding for their composting

Source: Envanto

capabilities and capacity, particularly post-consumer residential or commercial streams which can include compostable packaging.

For EPR policies to be successful, it is important for the state to have a comprehensive understanding of infrastructure and collection capacity and capabilities. The needs assessment—a study that is carried out to understand EPR program needs—is a key step in this process. In addition to the states that have already passed EPR, states like Illinois, Maryland and New York are undertaking needs assessments to gain insight into how EPR programs could be setup in each state.

It's critical that municipalities and composters are involved during the assessment in order to advocate for the prioritization of compostable packaging and funding towards composting infrastructure, and to provide the necessary infrastructure and economic information to facilitate inclusion of compostable packaging in EPR. The data gathered from these studies will help inform the total funding made available to composting infrastructure and how that funding is allocated. Funding for composting infrastructure will be smaller compared to conventional recycling, given the smaller market share of these materials and the relative nascency of food-composting sites that accept these materials across the U.S. However, these funds can be crucial for kickstarting collection programs, equipment or facility development, public education, and pilot programs to mitigate contamination and promote composting within your jurisdiction. Keep in mind: because EPR is a packaging policy, EPR funding is typically only available to compost manufacturers and programs that accept compostable packaging materials.

Source: Envanto

**CASE STUDY**

# Passing & Implementing Organics Diversion Policy

## CITY OF AUSTIN'S UNIVERSAL RECYCLING ORDINANCE

CONTACT

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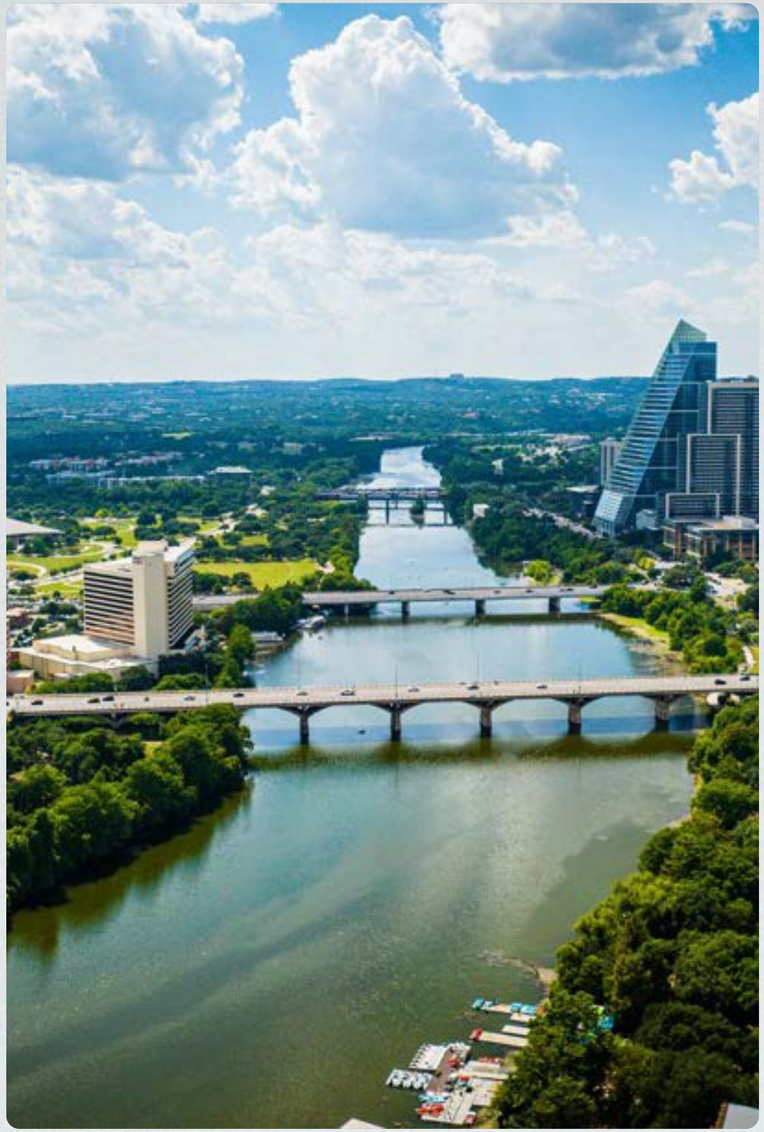
The City of Austin's (pop. 964,177) 2011 Resource Recovery Master Plan serves as a guiding policy document for developing Zero Waste policies and programs, including setting diversion goals of 75% by 2020 and 90% by 2040. In 2014, the Universal Recycling Ordinance was amended to stagger requirements for organics diversion between 2014 and 2018. The City has worked with stakeholders from the beginning of the policy development process, including the Zero Waste Advisory Commission (ZWAC), residents, businesses, nonprofits and others to understand the community's needs and develop a draft policy that includes broad community input. City-operated social media pages and the City of Austin's Zero Waste Block Leader program amplified public engagement opportunities, such as public meetings and surveys. The ZWAC reviewed the draft policy before staff presented it to the City Council.

The City of Austin advises other communities pursuing similar policies to consider the variety of covered entities (individuals or businesses that must comply), materials generated and collection types. Some entities are unique and have challenges complying. For example, mobile food vendors often prepare food in a shared commercial kitchen, making reporting and compliance difficult. The city hopes to explore tailoring requirements for different types of businesses and properties to ease burdens and better meet their unique needs. Also, the city reports initially underestimating the resources required to enforce this ordinance effectively. The city currently has two code inspectors specifically for the URO, with plans to grow.



Source: Envanto

**CASE STUDY**

# A Regional Approach to Diversion & Ordinance

SUMMIT COUNTY, COLORADO

CONTACT

Rachel Zerowin, Director of Community Programs,
High Country Conservation Center

Source: Envanto

**Summit County, CO** (pop. 31,000) includes four municipalities ranging from roughly 1,000 to 5,000 people, plus two small towns under 1,000 each. Many residents live in unincorporated Summit County. The County is a good example of a regional approach to materials diversion policy and program adoption. The County owns and operates the Summit County Resource Allocation Park (SCRAP), a landfill with a recycling collection center, transfer station, organics collection and composting facility. Additional drop off collection sites are located throughout the County.

Commercial hauling businesses and the municipalities take collected materials to the SCRAP. With the support and coordination of a local nonprofit, High Country Conservation Center (HC3), the County and its four largest municipalities jointly developed a county-wide strategy to protect existing asset investments at the SCRAP, create a sustainable funding source for future diversion programs and encourage additional diversion in the region. The group developed a Zero Waste task force in 2010 that included government staff and elected officials, and representatives from local waste industry, ski resorts and restaurants. In addition to HC3, the county engaged consultants specializing in materials management and Zero Waste policies. Model policies developed by the Zero Waste task force were provided to individual jurisdictions to vet within their communities, adjust for local context, and hopefully pass. To date, Summit County has adopted a 40% waste reduction goal by 2035 and has passed a county-wide mill levy through the Ballot Initiative that funds Zero Waste management in addition to other community initiatives. The task force also created a requirement for all solid waste collected in the county to go to the SCRAP. In 2022, the towns of Frisco and Breckenridge both passed Universal Recycling Ordinances based on the model the Task Force drafted (the County is leaning towards adopting a URO for unincorporated areas as of late 2023).

**CASE STUDY**

# Lessons Learned on Stakeholder Buy-In & Ongoing Challenges of Contamination

## CITY OF BOULDER'S UNIVERSAL ZERO WASTE ORDINANCE

CONTACT

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In 2015, the **City of Boulder, CO** (pop. 104,175) passed its Universal Zero Waste Ordinance (UZWO; Boulder Revised Codes 6-3-13, 6-3-14 and associated City Manager's Rules) requiring all properties to have recycling, trash and compost collection services. Boulder's UZWO also requires all properties to have bins, display instructional signage, and train employees and tenants on how to sort their waste properly. The UZWO was implemented in 2016, and enforcement began in 2017. As a result of UZWO implementation, waste diversion rates in Boulder jumped notably after approval of the ordinance, from 39% in 2015 to 57% in 2018.

The success of the UZWO has been due to the city's intentional engagement with businesses throughout the process. At the beginning, city staff facilitated several stakeholder meetings, where they presented the framework for the policy and instead of asking, "do you support or oppose the policy?" asked, "what challenges do you foresee for your business in implementing this policy and what recommendations do you have for the city to help you with implementation?" This created a more collaborative environment for city staff and stakeholders, including a wide range of city businesses, to work together to develop a policy that could be successfully implemented. Additionally, external groups from the community, including Eco-Cycle, provided educational materials (i.e., factsheets and FAQs) and held public meetings for city residents, city council members and council candidates. As a result, there was no opposition to the policy at the public hearings and council voted unanimously to approve it. Once passed, the city partnered with Boulder County to assist with compliance. PACE staff went door-to-door and provided direct assistance to businesses (i.e., designing efficient waste collection systems in front and back of house, providing bins, signage and tools for staff trainings).

The City of Boulder uses a webpage as a resource hub to provide free and downloadable general and business-specific signage, instructional videos, a quiz, ordinance language, a list of haulers and any other updates regarding the UZWO. The city enforces the UZWO based on public complaints, failures to report compliance and inspections. Enforcement of the UZWO was suspended during the COVID-19 pandemic. In 2023, the City of Boulder suspended requirements for front-of-house/customer-facing composting at commercial properties because of ongoing contamination issues, which shows just how challenging contamination can be, even in well-established programs. Businesses that want to continue front-of-house/customer-facing composting may continue to do so, and the city provides additional tools to help these businesses.

# CHAPTER 2.
# SCALING COLLECTION & INFRASTRUCTURE

CHAPTER 2.

# Scaling Collection & Infrastructure



Food scrap collection is intrinsically intertwined with processing of the materials collected. The compost manufacturer, by permit and/or preference, may or may not accept all types of food scraps and food-contact compostable packaging. What the facility accepts directly impacts what a jurisdiction can include in its food scrap collection service if it opts to use that compost manufacturer. In situations where multiple composting facilities accept food scraps, there may be opportunities to submit a request for proposal to include certain feedstocks, or to negotiate directly with a compost manufacturer to accept items such as food-soiled paper, certified compostable plastic liner bags and other certified compostable food-contact packaging.

Because food scrap collection and processing are so interconnected, this chapter includes both collection and processing infrastructure. How each impact the other, and options to find your jurisdiction's "sweet spot," are discussed.

## Collections Programs

A typical, and usually wise, approach in planning for organics collection is to take it step by step, perhaps starting with a network of drop-off points or setting up a pilot. In large part, the form of the collection program hinges on what compost processing infrastructure exists locally, what materials they accept and don't accept, whether the operator has capacity to accept the anticipated volume and the ability to handle contamination, and at what price.

A key piece of data necessary for planning is how many households will be targeted or served by the program, and the volume of organics they generate. If a jurisdiction has a municipal solid waste hauler licensing ordinance with an annual reporting requirement, it may be possible to glean a rough estimate from looking at landfill and recycling stream data. The EPA estimates that individuals generate 4.9 pounds of waste per day, and that the MSW stream consists of 22% food scraps. A nearby community that already has a program similar to what is being envisioned is a great source of "real" data.

Participation rates depend on whether there is a cost to participate, convenience and whether participation is mandatory. Volumes collected in voluntary participation programs often start low, unless participation is incentivized by savings on trash fees, and slowly increase over time. A key variable in increasing participation is the jurisdiction's communications strategy. Pilots are a popular approach to establish new collection programs, and typically target one neighborhood. This can be effective to both collect real data and to

debug all elements of a program before expanding. Consider that the socio-economic demographics of the neighborhood chosen for the pilot can greatly impact the results. It's important therefore to work with neighborhood groups to assure wide representation that reflects the whole community. Because pilots set an expectation among participants that it will continue, it's recommended to use them as an initial step in implementation of a larger program (ideally with seamless service to pilot participants in transitioning to full scale) rather than solely for data collection.

## Incentives

### Volume-Based Pricing or "Pay-As-You-Throw"

One of the most effective ways to encourage residents to divert materials into a composting (and recycling) program is through volume-based pricing, often referred to a Pay-As-You-Throw (PAYT). Volume-based pricing charges customers for the size of their trash bin while bundling recycling and sometimes composting at no additional cost, regardless of the size of recycling and composting bin the customer selects. Volume-based pricing ordinances can be paired with UZWO/UROs or universal hauling contracts, including in jurisdictions that use one hauler for collection of trash and recycling and a separate hauler for compost. It is advised to establish contamination safeguards (i.e., bin not picked up if too much contamination is present) when PAYT systems are established to discourage contamination ending up in the recycling or compost bins.

Research shows that the most effective pricing structure for driving diversion behavior is an 80% increase in cost for double the size of trash containers (e.g., $10/month for 32 gallons, $18 for 64 gallons, and maintaining that dollar differential, $26 for 96 gallons). Edgewater, Colorado requires volume-based pricing via its municipal hauling contract for trash and recycling. The volume-based pricing incentives carry through for residents that opt into the municipal program with the compost hauler. Residents with 96-gallon trash bins pay more for composting service than those with smaller bins.

A criticism of volume-based pricing is that some residents will use the recycling or compost bin as an additional trash cart, thus contaminating the streams. As with any new policy or program, including PAYT, education helps residents and businesses understand the intent of the change and helps create buy-in and behavior change. In addition to education, cart tagging and directing haulers not to pick up contaminated carts will reduce unintended contamination and intentional misuse of carts. *See Rolling Out Communications and Engagement chapter*.

### Denver Implements a Sliding Scale Instant Rebate for Lower Income Households

Denver City Council passed its Expanded Waste Services policy that increases the city's recycling collection to weekly instead of every other week, provides curbside composting carts to residents at no extra cost, and switches from a taxpayer funded system to a volume-based billing system for all 180,000 residence. Through this policy, Denver joined only a few U.S. cities offering a sliding-scale instant rebate based on household size and income to help low-income residents pay for up to 100% of their trash bill.

## Food Scraps Collection Program Types

### Drop-Off Collections

Food scrap collection stations, typically described as drop-off sites, can be as small as one or two locked tote bins located at convenient points around a community. They can also be established alongside existing yard trimmings drop-off locations. Though food scrap drop-off sites can be operated by the municipality, servicing the sites is frequently done in partnership or by contract with a third-party compost collection company or organization. Local government financial investment in a food scrap drop-off program may be as little as publicizing local composters' programs online, community outreach about the program, or providing space for the drop-off bin (often at a prominent location such as a recreation center, town hall, recycling center or public park). User subscriptions to drop-off compost programs are typically less expensive than subscriptions to curbside collection programs. Some municipalities subsidize all program costs or memberships to private compost businesses.

To mitigate contamination, access to food scrap collection points can be controlled by locking the bins/totes and providing site users with the combination or a key card to open the container. Many jurisdictions have food scrap drop-off sites at transfer stations or recycling depots that are staffed when open, helping to control contamination. Residents interested in participating typically register for the program and then are trained on how it works, and what materials are and are not accepted. Registering for the program also allows program coordinators to email or text participants about common contaminants seen in the stream and to update them when lock combinations are changed. Touring an existing food scraps drop-off site helps local decision makers see this collection option in action, providing visuals of site layout, types of collection containers and signage.

Source: Envanto

## Scarsdale Helps Other Municipalities Setup Food Drop-Off Programs

The City of Scarsdale, with aid from a local sustainability committee, developed a food scrap drop-off-based model and assisted other municipalities with adoption. The programs are municipally run and volunteer supported. Participants sign up in-person at events or locations where the bins are located. Enthusiasm from volunteers who participate in the composting program is key to recruiting new participants. They recommend that jurisdictions sell participants a starter kit with pail and bin when they sign up, so that residents can get started right away. Inquiries from other jurisdictions looking to learn from a successful program are welcome. *Reach out to compost@scarsdale.com.*

### Bucket-Based Food Scrap-Only Collection

In the absence of municipal food scrap collection programs, a flourishing network of start-up entrepreneurs offering subscription services in communities of all types has grown in the last decade. Starting a program may be as easy as contracting or partnering with an existing collector found in the Institute for Local Self Reliance (ILSR) Composting for Community map. Because customers must agree to terms and subscribe for a fee that is usually higher than the cost of trash collection—and because it's a far more personalized service, typically with a clean bucket provided at one's doorstep with each pickup—these collectors have minimal contamination to manage. Another benefit is that there are various ways to offer it to residents of multi family complexes in addition to single family residents. However, this type of service creates a clear equity issue due to the relatively high cost per household. To address this gap, a jurisdiction may be able to subsidize the cost for qualified residents. If bucket-based collection is considered a first step before moving on to more comprehensive services for a wider scope of residents, it's possible to structure contracts to allow entrepreneurial haulers to continue to play a role. *See Developing Contracts with Service Providers chapter*.

### Curbside Combined Yard Trimmings and Food Scrap Collection

An existing curbside yard trimmings collection program gets a community familiar with organics separation following a simple and understandable set of guidelines. If it is a cart-based program using a standardized container (e.g., 64-gallon), adding food scraps to weekly or biweekly yard trimmings collection can be accomplished with minimal or no increase in collection costs. During the program design phase, a jurisdiction with bulk leaf and brush collection can determine whether it wants to use food only curbside carts or buckets or implement commingled yard trimmings and food scraps collection. Contamination may increase when adding food scraps to the collection program due to various factors, so education and outreach must ramp up significantly—more than was necessary with yard trimmings only. Consumer confusion over compostable products and look-alike non-compostable options (e.g., green-colored conventional plastic produce bag) can cause contamination levels that exceed a composter's ability to manage the incoming stream and make clean compost, particularly if the composter does not have special equipment or a process designed especially for post-consumer food scraps. When adding food scraps collection, it is imperative to roll out a communications and education campaign to support clean streams. *See Rolling Out Communications & Engagement chapter.*

**It is essential to first consult fully with your composter before moving to commingled food and yard materials collection, as taking in food scraps likely involves a change in the facility's permit or registration.** If the food scraps are destined for anaerobic digestion in a wet anaerobic digestion system, commingling is not an option.

### Commercial Source-Separated Organics Collection

States that mandate food scrap collection typically first target large quantity commercial generators and then phase in smaller generators and eventually households over several years. Depending on the state, local jurisdictions may be compelled to begin with commercial collections. Pre-consumer food scraps generators, like grocery stores, kitchens and food processing facilities, have fewer points of entry for contamination than public-facing collections and therefore could be the best first target. *See Navigating Policy chapter* for more on "front-of-

## Hauling and Processing Infrastructure

### Hauling Considerations

Hauling waste to a distant composting facility can significantly increase collection costs. Transporting compostable waste or finished compost gets too expensive if the travel time is more than one hour each way. The cost adds up quickly, especially with longer distances. Imagine a big truck carrying 24 tons of material—every extra mile adds almost $10 to the cost (assuming a transport cost of around $4.50 per mile, which might be even higher now with fuel prices). This means the ideal location for a composting facility depends on the roads around it. In rural areas with slower roads, a 50-mile radius is best. But near a highway, the facility could reach areas 75 to 100 miles away. It's not a strict rule, but it's a good starting point.

A partnership with an existing transfer facility may be helpful if one exists close enough to justify the transfer fee and cost to haul in a truck made for the purpose, compared to the cost and lost time of hauling directly in collection trucks. An existing garbage transfer station can be utilized but is only advisable if the organics transfer function can be physically separated from the garbage transfer function. If your jurisdiction is among several in the region planning to add or expand organics collections, a new, centrally located shared transfer station dedicated to organics could be an excellent long-term solution. Most states have a permit requirement for solid waste transfer stations, which can include that tipping and loading must occur under a roof to avoid contamination of stormwater. Check with your regulatory authority about what is required before proceeding with plans.

### Processor Relationships

Before considering and evaluating collection and hauling options, it is necessary to initiate conversations with the intended compost manufacturer(s). While requesting bids or information through a formal process can be useful, and may be necessary to meet municipal procurement requirements, it's advisable to meet informally with the prospective composting partner as a first step to assess the viability of a partnership. Flexibility in structuring a partnership or more flexible contracts can be helpful for developing a positive relationship with local composters.

**Some general questions to review with a prospective composting partner include:**

Source: Ag Choice

**1. Can the composter accept the feedstocks your program intends to collect?** This step should be addressed before you meet. Stipulate what requirements need to be met in order to accept food waste and other organic materials. Permits also dictate the amount of specific feedstock it can receive (i.e., <5,000 tons of food waste per year). There are several resources to assess if your local composters can accept certain feedstocks, including:

**a.** Find a Composter provides an interactive map of composting facility locations throughout the U.S.;

**b.** Sustainable Packaging Coalition's (SPC) map of composting infrastructure and legislation;

**c.** EPA's interactive Excess Food Opportunities Map provides details on potential generators and recipients of excess food across various sectors (industrial, commercial, etc.) along with estimates of how much food each type of generator might have available;

**d.** BioCycle Connect keeps a database of food waste composters across the United States. *Reach out to noragold@biocycle.net for details.*

**2. Is the composter interested in accepting your materials? What tip fee would they charge?**

**3. Are they equipped to process post-consumer streams that may contain contaminants that need to be removed?** What contamination removal processes are in place? Do they inspect incoming loads and assess fees if contaminants are found to exceed a standard?

**4. Are certified compostable products accepted?**

**5. Do they have limitations or stipulations that would need to be met through your communications plan or that impact the guidelines of what your program can and cannot accept?**

**6. In the realm of relationship-building, it's useful to learn more about the company.** General questions like, "share with me a bit about your business model" can provide insight about the viability of your jurisdiction's partnership and expose potential risks to the collection program. For example, if municipal collections do not constitute a primary feedstock or area of focus for the composter, a trial period may be necessary. Or, if compost for use by certified organic growers or for use by the plant nursery industry are major end markets for the company, they may not be able to accept compostable products.

## Considering Adding Compostable Packaging to Your Program? Here's What You Need to Know About the State of Composting Infrastructure Today.

According to BioCycle's 2023 Infrastructure Survey, there are 201 full-scale compost facilities in the U.S. that accept food scraps, about 70% of whom accept some form of certified, food-contact compostable packaging. Since 2018, the composting industry has witnessed a 13% increase in the number of full-scale compost facilities that accept compostable packaging, reflecting an increase of these materials in communities, composter trust in certified compostable materials, and macroeconomic factors like the proliferation of food waste bans that require processing solutions for post-consumer organic streams (i.e., feedstock with compostable packaging).

These bans and mandates have prompted the development of new collection programs. The U.S. has observed a 49% increase in the roll out of curbside residential organics collection since 2021. Of 261 curbside collections programs across the country, 44% accept some form of certified compostable food packaging. Many programs that do not allow for compostable packaging maintain this policy because the local composter

produces an organic compost product, which cannot have compostable packaging as an input.

The Composting Consortium's 18-month study of the disintegration of compostable packaging—which tested 23,000 units of certified compostable plastic and fiber packaging—illustrates that by and large, certified food-contact compostable packaging breaks down in the compost pile. To increase composter trust and acceptance of food-contact compostable materials, municipalities can leverage the findings from this study to educate and inform their partners about the realities of certified compostable packaging.

Equally important to trust in these materials is the incentive to collect and process them. The hardest-to-process organic streams are post-consumer streams, which often contain some level of contamination, irrespective of whether a composter has a policy to accept or not accept compostable packaging. Therefore, it is crucial for municipalities to account for the cost of processing these more complex organic streams with an appropriate tip fee (i.e., $/ton of feedstock accepted) and incentivize accepting these materials through funding mechanisms (i.e., grants, policies and programs).

## Infrastructure Options

### Public/Private Partnerships

Whether via a contract, memorandum of understanding or informal agreement, many municipal collection programs rely on a partnership with a private composting company to receive and process the materials collected. The *Developing Contracts with Service Providers chapter* of this Blueprint offers specific guidance for developing a request for proposal (RFP) and contract, and serves as a useful checklist even if a contract is not part of the partnership.

The obvious benefit of a public/private partnership is that the jurisdiction does not incur the costs and risks of building, permitting and owning a compost facility. The downside is that in many parts of the country, a collection program does not have a viable backup option should the partnership fail, company priorities change, or the compost site closes or moves further away. With a good working relationship, a municipal collection program and a private composter can evolve together to work through inevitable challenges. Food scraps collection for composting is still a very new landfill diversion tactic for most of the country, akin to the state of the recycling industry in the 1980s. Long-term program success requires flexibility of both parties. Best practices for processing post-consumer organics, communicating with generators, end market development, and even state regulations are all still under development.

### Building a Public Composting Facility

If local composting infrastructure does not exist within reasonable hauling range or is insufficient for the collection program, it's worth considering building a publicly owned facility. Jurisdictions may choose to operate the facility or contract operations to a private operator (see San Antonio, TX case study.) If the jurisdiction owns its own landfill, co-locating a composting facility on the same site has many benefits, from an easier path to a permit, to simplified hauling, to on-site use of the finished compost after a landfill cell is capped. Likewise, if the jurisdiction owns a yard trimmings composting facility, many states are adjusting their permitting process to make it easier to begin accepting food scraps. Read more about site development in USCC's Target Organics Hub.

**Considerations for the viability of building a new public composting facility include:**

1. **A viable site or sites.** Local zoning, evaluation of groundwater and stormwater flow, and distance to neighbors are some of the key evaluation criteria for a site. Hiring a consultant who specializes in composting facility siting is recommended.

**2. A jurisdiction's level of comfort operating an enterprise.** Experience operating a facility as a business or social enterprise by the public agency, or contracting out to a service provider, is very important for long-term sustainability.

**3. Meeting key goals.** Evaluate whether a composting facility helps meet key government-wide goals such as waste diversion and greenhouse gas reduction or increasing local resilience. Success in building and operating a composting facility requires close collaboration among several departments of local government that is often only possible if prioritized government-wide.

**4. Thorough public engagement process.** Unhappy neighbors have closed down many composting facilities or stopped them during the planning process. It's natural for nervous neighborhoods to imagine the worst, so it's very important to be able to provide accurate information about measures to be a good neighbor and benefit the community at large. If possible, providing tours of a similar facility nearby can be very helpful. Above all, give all stakeholders a voice throughout the process, beginning with the design phase and continuing through operation.

**5. Use for finished compost as a community benefit.** Some level of retail sales or compost giveback to the community is desirable and helpful to creating community awareness of a local circular economy for organics and community support for the compost site. Finished compost from the public facility can also replace fertilizers or soil amendments purchased by other departments within the jurisdiction such as parks, road maintenance, properties or publicly owned open space.

Building a public composting facility also requires an evaluation of available financial resources. The composting industry is evolving to include more examples of distributed composting infrastructure for smaller sites that require less startup capital, but contamination removal equipment and the need for buildings can quickly drive costs upward. A good consultant is essential to help create a design and operation plan complete with capital and operating budgets. **Capital expenditures when designing a public composting facility may include:**

**1. Permit application.** Developing an engineering, design and operations plan for a state composting facility permit application can be time intensive. Some states require significant groundwater and soils testing. Look up your state permitting regulations at the US Composting Council's website, here.

**2. Securing local permits.** Many jurisdictions do not list composting as a potential land use. To avoid being miscategorized into a zoning code that requires costly improvements that do not benefit the community or the operator, an easier path can be to first establish clear zoning rules for composting. *See guidance on changing zoning in the Navigating Policy chapter*.

**3. Site improvements.** These may include utilities, truck acceleration and deceleration lanes, internal roads, perimeter berms, a stormwater management system and an impermeable composting pad.

**4. Enclosures.** Truck scales and a tipping/mixing building that can be closed off while a truck is tipping materials inside is often incorporated into the design of facilities processing food scraps. Especially in the summer, tipping loads of volatile food scraps that may have been rotting in a dumpster for a week can be a major source of odor, so tipping and mixing with wood chips or other carbon source/bulking material may need to be done indoors. Negative air pressure in the building


Source: Common Ground Composting

and a biofilter for exhaust air are also useful for containing odors.

**5. Purchase and installation of the composting system.** Basic windrow composting may not require purchase of a "system;" however, more control is required when the composting operation is located close to neighbors. An aerated static pile composting system is an example of a relatively inexpensive option that also can have good odor control and management of groundwater and stormwater.

**6. Specialized equipment.** Purchase of specialized contamination removal equipment such as trommel screens or depackagers can be considered. Depackagers are specialized machinery used to separate protective packaging from food (e.g., tuna cans, ice cream tubs, etc.). Many composters who accept large volumes of food waste and compostable packaging run these materials through a depackager, alongside other conventional packaging. It is important to note that the depacking process separates all food packaging, compostable or not, from the organics stream. All packaging is then sent to landfill. Moreover, emerging research has shown that depackaging produces microplastics (< 5mm in size) in composting and anaerobic digestion systems. When microplastics are present in the finished product, it creates potential economic, environmental and health challenges for both the composter and the buyer who uses that finished compost.

**7. Purchase of general handling equipment.** This machinery includes front-end loaders, skid-steers, dump trucks, conveyors and finished compost screens.

## Leveraging Entrepreneurial Composters and Private Compost Sites

The growing trend of "bucket-based" collections and community composting programs, like those offered by the hundreds of members of the Community Composting Coalition, could significantly boost the expansion of composting infrastructure, which is crucial to meet the rising demand for organics collection. Business models among Coalition members range from volunteer-based collections and backyard-style composting at community gardens, to highly motivated entrepreneurs looking to create community-wide benefits through collection service and composting.

In many states, it can be difficult to secure operating permits and comply with local zoning codes that

do not consider composting as a land use. To overcome these hurdles, some members of the Community Composting Coalition have taken a creative approach by building smaller composting sites that don't require permits or partnered with local farms to use the finished compost. These efforts have highlighted the importance of building close relationships between the composting businesses and the communities they serve, and encouraged regulators and planners to reconsider how they view setting up smaller and larger scale composting sites.

If these businesses already operate in your jurisdiction (see Community Composting Coalition map), it's worth considering how the local government might align with them for mutual benefit, with or without a formal partnership. The *Navigating Policy chapter* of this Blueprint includes suggestions such as codifying in which zoning districts composting is allowed.

Source: Housatonic Resources Recovery Authority

**CASE STUDY**

# Successful Public-Private Partnerships

ATLAS ORGANICS AND THE CITY OF SAN ANTONIO, TX

CONTACT

Nick Galus, Assistant Director, San Antonio Solid Waste Management Department, Austin Resource Recovery

**The City of San Antonio, Texas** (pop. 1.4 million) shifted residential solid waste fees to a Pay-As-You-Throw model in 2016. That transition led to organics carts for all households, serviced by the city's Solid Waste Management Department (SWMD), with an incentive to participate by opting for a smaller trash cart. The fee-based system helped fund roll out of commingled food scraps and yard trimmings collection city-wide. The City originally contracted with a private composting facility for processing but decided in 2020 to shift its approach to a public/private partnership model. In January 2020, a request for proposal (RFP) was issued for procurement of "Organics Material Processing Services."

For the solicitation, SWMD made land available at its closed Nelson Gardens Landfill for the composting facility. Atlas Organics won the contract. Under the terms, Atlas leases about 70 acres of land from SWMD at the closed landfill under a 10-year operations contract. They were responsible for design, construction and installation of permanent infrastructure improvements, including procurement of pick line assets and equipment for the facility. Funds were allocated by the city to Atlas Organics for infrastructure improvements and equipment. An ordinance authorizing the lease and the contract agreement requires Atlas Organics to accept all SWMD loads for organics processing, including any non-organic or contamination material below 5% by weight. The city pays a tipping fee of $27.50/ton for the 10-year period (plus annual CPI increases). The contract does allow Atlas Organics to receive feedstocks from other generators besides the City of San Antonio. Upon termination of the contract, equipment procured with city funds remains at the improved composting site.


Source: Atlas Organics, A Generate Upcycle Company

**CASE STUDY**

# Adding Food Scraps to Existing Yard Trimmings Composting Facility

## TOWN OF BETHLEHEM, NEW YORK COMPOST FACILITY (PUBLICLY OWNED AND OPERATED)

CONTACT

Dan Lilkas-Rain, Recycling Coordinator, Recycling & Composting Department Head

Source: Envanto

**Bethlehem** (pop. 35,034) has composted yard trimmings for 25 years in support of the Town Highway Department's popular free, weekly, year-round curbside leaf and limb collection program. To avoid the cost of hauling to a distant facility and preserve the resource for Town use, the Town set up a simple windrow composting system on a large, paved site it owns. For both sustainability and cost-saving for residents (composting is cheaper than trucking farther and landfilling in the area), the Town decided to evaluate the addition of food scraps at the compost site. In 2017, it conducted a pilot program to test using the aerated static pile (ASP) composting method with commercially hauled residential and commercial scraps at the yard trimmings facility. Success with the pilot led to a full-scale program. Food scraps are accepted onsite from pre-approved commercial haulers at a rate of $15/cubic yard or $30/ton and composted in ASPs. As a first step in residential food scrap collection, the Town is setting up a network of drop-off points, beginning with one at the composting facility. Eventually, it may contract with a private hauler to pick up source-separated food scraps town-wide.

**CASE STUDY**

# Compost Entrepreneur Gains Municipal Support

COMPOST JAX/SUNSHINE COMPOST, JACKSONVILLE, FLORIDA (PRIVATELY OWNED AND OPERATED)

CONTACT

Mike Kelcourse, Founder and Owner

Source: Compost Jax

One often-overlooked path for jurisdictions to establish organics collection and processing infrastructure is to identify and support local entrepreneurs with similar goals and interests. **Jacksonville, FL** (pop. 947,000) didn't have a compost-friendly environment when the founders of Compost Jax began their quest to start a composting business. The founders held down a long-term site lease while taking three years to gather state and local permits before they could begin operations.

Compost Jax owners had significant prior experience with solid waste management and commercial composting in states with mature collection programs, and thus expected that the local municipalities would eventually find them to be a resource for considering food scraps collection. Their primary feedstock is bulk food scraps from several large food processing plants nearby, for which the company created a hauling service.

Jacksonville is divided into districts to contract with private haulers for trash and recycling collections. As is common in many states, regulators looked to landfill permitting requirements as the closest model for a composting facility in the absence of requirements specific to composting.

The first foray into government partnership was a commercial pilot food scrap collection service administered by the city, with Compost Jax providing the hauling. At the time, Jacksonville did not have public or private infrastructure for food scrap collection. Local landfill costs were high, however, and diversion for composting had the potential to save local businesses and residents money if a hauler was willing to provide the service.

The City of Jacksonville has expressed interest in eventually setting up a residential collection program, as have other cities in northern Florida, now that a composting facility exists in the area. Compost Jax hopes to eventually hand off collection to private haulers so it can focus on composting.

**CASE STUDY**

# Managing Contamination Through Simplicity

WINDHAM SOLID WASTE MANAGEMENT DISTRICT
COMPOST FACILITY, BRATTLEBORO, VT
(PUBLICLY OWNED AND OPERATED)

CONTACT

Robert Spencer, Executive Director


Source:

When the **Town of Brattleboro** (pop. 12,000) wanted to start a residential organics collection program, it looked to the contracted hauler providing curbside trash and recyclables collection. The Town and the hauler negotiated an agreement to add residential food scrap collection. The closest composting facility was 20 miles away and the Town owned a small but viable site, so it approached the Solid Waste District to set up a local composting facility. Initial volumes collected were small enough that the compost operation qualified as conditionally exempt from needing a full permit under the state's "registered" status, which significantly lowered permitting costs and regulatory requirements. The facility uses a loader-managed windrow composting system and accepts all food scraps and soiled/non-recyclable paper, as well as BPI-certified compostable products.

The District, which services a total population of 37,000, requested a contract with the Town to assure flow to the compost facility, and also opened the facility to accept commercial organics from Brattleboro, as well as from residential drop-off stations (a common trash collection practice in Vermont) in communities nearby, which are now required by state law to accept source-separated food scraps from residents. The Town has moved to a Pay-As-You-Throw (PAYT) system of tiered pricing for every other week trash collection and free weekly collection of organics and recyclables. Garnering support for PAYT was significantly aided by the fact that landfill tip fees are nearly twice the cost of composting, so removing organics from the waste stream saves money.

Moving to PAYT caused a big surge in organics collected, which exceeded the allowable feedstock volume under the "registered" classification and required the District to obtain a new permit under the "medium-sized" state classification. To meet the new requirements (such as a leachate collection system) and accommodate the volume without increasing the operation's footprint, the District is now accepting bids to build an indoor aerated static pile composting system.

# CHAPTER 3.
# DEVELOPING CONTRACTS

CHAPTER 3.

# Developing Contracts With Service Providers

- **Section Overview**
  - Methodology
  - Key Stakeholders
  - Number of Contracts
  - The Role of the RFP
  - Contractual Best Practices
  - Case Studies





A well-written contract is vital to the success of any organics collection program. It establishes a formal agreement between you and your partner(s) outlining terms and conditions, roles and responsibilities, payment structures and more. It will be referenced throughout its duration to provide accountability and protect the program's sustainability. This section will provide insights on how to optimize the language included in your contract for the best vendor relationships and stable programming.

## Methodology

Recommendations are based on nationwide interviews and analysis, conducted by the Composting Consortium, of various contracts from different population sizes, program maturity and vendor types (see Figure 3). The defined terms and responsibilities, use of incentives, promotion of equity, and effectiveness of the program's contamination control were evaluated. The conclusions are summarized in the recommended best practices.

Source: Envanto

## DETAILS ABOUT CONTRACTS AND INTERVIEWS

**8 INTERVIEWS CONDUCTED**

**11 CONTRACTS REVIEWED**

CONTRACT/INTERVIEW TYPE

**13%** HAULING

**38%** PROCESSING

**49%** HAUL & PROCESS

PROGRAM AGE

**18%** 0-5 YEARS

**29%** 6-10 YEARS

**53%** 11+ YEARS

MUNICIPALITY SIZE

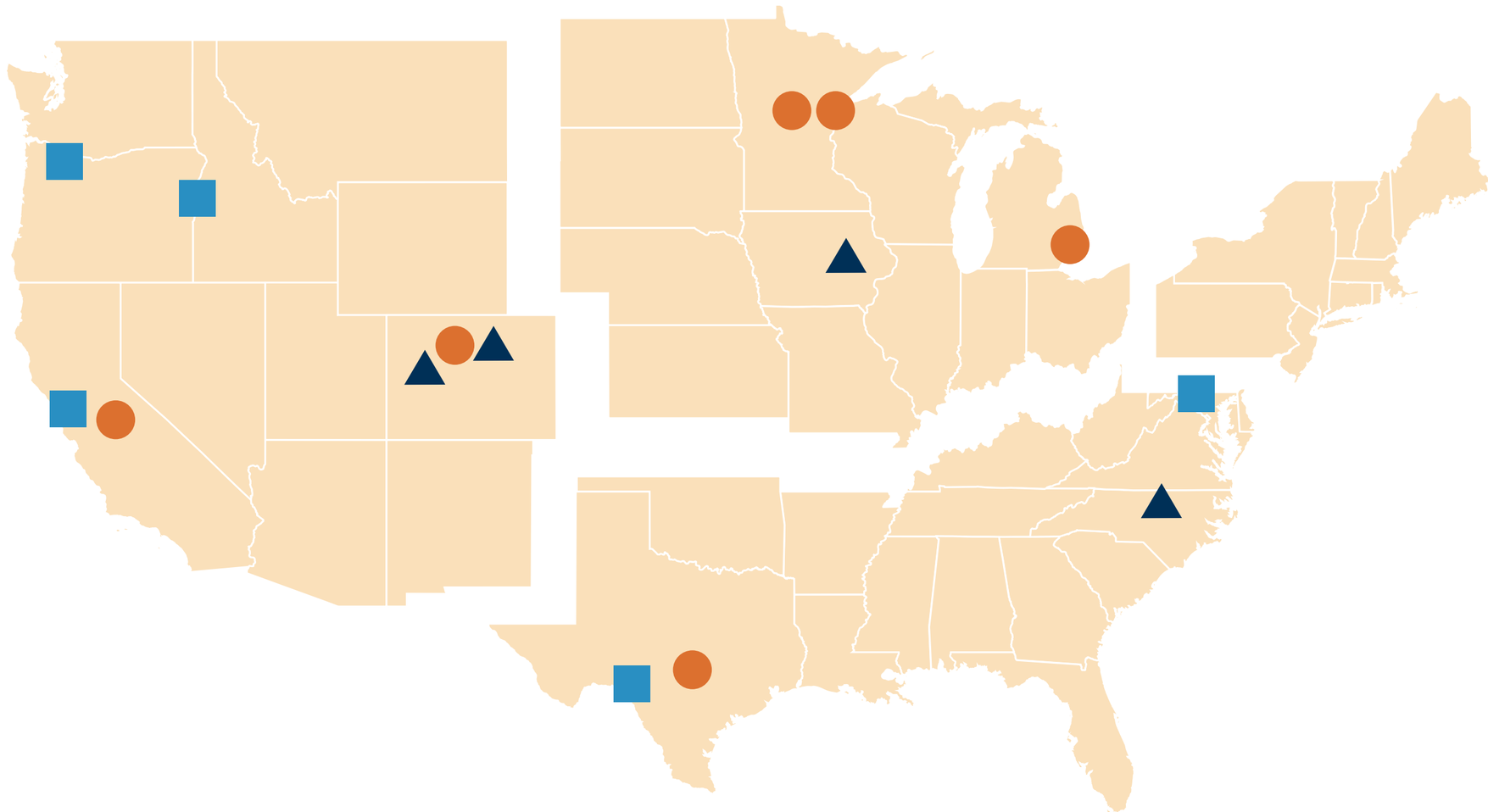
**93%** URBAN

**7%** SMALL TOWN/RURAL

KEY

- CONTRACTS
- INTERVIEWS
- CONTRACTS & INTERVIEWS

## FIGURE 3. MAP OF JURISDICTIONS WHERE CONTRACTS AND INTERVIEWS TOOK PLACE



## Key Stakeholders

Many external and internal stakeholders will be involved in this process. Internally, align with the operations, budget and policy teams to review your strategy and content. The Contract Manager, if one is on staff, will likely lead with content. Otherwise, consult with your legal counsel on templates, as well as throughout the program planning process—from drafting language to closing signatures.

Two primary vendors must be in place to operationalize a collection program: a hauler and processor. The hauler will collect the organics from the curb or drop-off site(s) then transport them to the processor who in turn will transform them into finished compost. These vendors may work together or separately depending on relationships and infrastructure. Internal resources can be leveraged to fill one of these roles. For example, the New York City Department of Sanitation uses its own sanitation workers to collect residential food scraps and only contracts out for processing. Pursuing this option may necessitate negotiating with employee unions.

## Number of Contracts

If an externally managed program is being planned, the first step is to determine the contract type, whether services will be bundled into one contract with one vendor for both collection and processing, or whether two separate contracts will be executed to separate out the two services. Advantages and disadvantages to both are outlined in Table 1 and highlighted in some examples below. Once the number of contract(s) to manage is identified, the next step is to write a Request for Proposals (RFP).

**TABLE 1. SINGLE OR MULTIPLE VENDORS: PROS AND CONS**

| One Vendor | | Multiple Vendors | |
|---|---|---|---|
| PROS | CONS | PROS | CONS |
| • Single vendor relationship<br>• Fewer contracts to monitor | • Less control over program's operations<br>• Drives out competition in your area<br>• Over dependence on one processor can lead to operational challenges | • Diversified contracts<br>• More control of program's operations | • Multiple relationships/ contracts to monitor |

## The Role of the RFP

An RFP is an open call for vendors to submit a proposal to be your selected contractor. Proposals include a technical and financial plan for the program, while also attaching all necessary documents such as permits and certifications. An internal committee will review the submitted proposals based on a scoring system shared with proposers to remove bias from the selection process. A jurisdiction's Contract Manager may have guidance on procurement procedures. How an RFP is written is critical to the success of the ultimate contract. The content will either attract or exclude the right vendors from applying. The RFP also serves as a blueprint for the contract, outlining what can and cannot be included in the agreement. An alternative to issuing an RFP is to bid the project, but this is not recommended, as it locks the jurisdiction into the lowest bid rather the best equipped vendor to run the program.

## Contractual Best Practices

Once a vendor is awarded the project, the next step is to draft a contract to solidify the framework of the partnership. To best understand what information is valuable to include, this section is divided into six categories: operational logistics, finished compost, contamination control, customer service and marketing, environmental justice, and financial incentives.

### 1. Operational Logistics

To run a successful operation, the logistical roles and responsibilities between the vendor and the municipality need to be clearly defined. Use this checklist of concepts to guide the discussion with the selected vendor:

- **SITING AND PERMITTING**
  Either the municipality or the vendor applies for and manages the composting facility permit. For a new program, we recommend giving this responsibility to the vendor since they will be most familiar with the site. Over time, assess the efficacy and challenges of the permit management style and adjust to increase/relinquish control.

- **FACILITY OWNERSHIP**
  If owned by a private processor, do not attempt to change ownership. If owned by the municipality to be operated by the selected vendor, establish performance and professionalism standards (cleanliness, cleanup, odor control, noise standards, etc.). This practice allows the municipality to maintain control over an asset that can be leased as a way of bringing in revenue, maintains flexibility of who is operating the facility, and prevents changes to infrastructure without approval.

- **SITE MANAGEMENT**
  Facilities used by haulers are managed by haulers (e.g., a solid waste transfer station). The hauler has expertise in managing their operations and can rapidly respond best to any issues requiring attention, which benefits the jurisdiction. Similarly, the processor understands the equipment and processes required to successfully operate the facility, making them the best party to manage it. Some state regulations require having certified operators. The requirement to have a US Composting Council (USCC)-certified operator on site (at least one per shift) increases confidence in their operational capability and can serve as a point of assurance for municipal leaders.

### MONITORING AND REPORTING STANDARDS

Monitoring and reporting are best managed on a case-by-case basis and should be part of any organics collection program as a means of passive communication, a way to understand the strengths and pain points in the program, and a means to measure and convey performance of the program to participants. Each type of contract reviewed for this Blueprint had examples of various types of reports. The broad theme in each is the necessity to use monitoring and reporting to create standards of performance and to gauge program success. A key step is to identify which office receives the reports and what they do with those reports that help usher forward the program. All contracts require the reporting of the total quantities of organic materials collected and processed. Program performance reporting can also enforce standards to generate a positive impression within the customer base, which is vital to longevity and program growth. This can include requiring a maintenance request on bins to be resolved within a designated timeframe, or requiring the contractor to clean up any litter from operations (e.g., if a bin empties a few pieces of organic material onto the street or curb). Both help with creating a program that is professional in both function and appearance.

### FLEET OWNERSHIP AND MAINTENANCE

The best strategy is to let the ownership remain where it is. In the unique case where a fleet is purchased using blended finance (public and private capital), include a contract provision allocating the fleet to the municipality after the payback period. This will allow the municipality to lease the fleet to subcontractors in the future. For fleet maintenance, require that it be done by the primary user of the fleet/rolling stock (e.g., a subcontractor or the private hauler). Because the fleet may be the only part of the organics recycling system that customers see, include language requiring the appearance and professional standards your jurisdiction expects to see within the program.

### BIN OWNERSHIP AND MAINTENANCE

Resident bins should remain property of the vendor during the life of the contract and revert to municipal control at the termination of the contract. Doing so addresses a major financial and logistical procurement hurdle for a young program. As a program grows, new bins will need to be ordered and stored; it's best practice to have the vendor maintain, procure, replace, clean, distribute and store bins. This can be subcontracted if necessary. Another option is a cost-sharing agreement on the distribution or procurement of bins, particularly if the program is new and/or if the program is going through a large expansion.

## 2. End Product

Finished compost can be sold as a commodity. There may be limitations to how a government gets involved in this process, so outlining the distinction between the jurisdiction and the vendor(s) in this process is vital. Some best practices to consider include:

### OWNERSHIP

The hauler assumes responsibility for the organic materials once they are in the collection vehicle and can decide to subcontract the processing and distribution. At this point, the municipality should relinquish responsibility. The subcontractor then assumes responsibility for the organic materials once unloaded. This is the most natural point of transfer from the hauler's responsibility to the processor. The processor can use this clear point to hold the hauler accountable for the loads they bring in, whether the hauler is responsible for contamination control or not, placing a financial burden on the hauler and creating more incentive to bring clean loads to the transfer/drop site.

### COMPOST BACK TO THE COMMUNITY

The contractor owns the end product with a designated amount available for pickup or at community events (charged to municipal invoice or sold to citizens at concessionary rate). The long-term viability of the compost industry will rely on customer understanding that there is economic value to the products being produced by composters. That is why it is advised not to give away compost for free or to do so using a one-time voucher program. Also, the municipality is not well structured to manage external sales of products because it lacks the time, talent and market access that a private entity has. Some municipalities may also have restrictions on earning revenue, which complicates compost sales. Allowing the processor to make revenue from the compost also gives them a business incentive to create the best quality product possible. Access to the compost helps citizen see the positive outcome of a program they pay for and helps to build credibility and longevity in the community.

### TESTING

At a basic level, require testing at the processing site according to standards under the USCC's Seal of Testing Assurance program (STA), or other certifiers. Having to meet an established quality target has positive implications for the end product, creating a better accountability metric for the entire value chain.

Source: Recology

## 3. Communications & Customer Service

Establish a direct line of communication between your jurisdiction, the vendor(s) and residents to troubleshoot issues and provide ongoing education. Having a robust customer service structure and marketing plan is vital. Here are some structures to consider:

### CALL CENTER AND EMAIL OPERATIONS

Mirror the customer service flow of existing municipal processes to streamline the customer experience. The call center can direct customers to the hauler, but the municipality should be the primary contact. Consider adding contract language requiring the hauler to have a call center to manage inquiries on specific accounts and general issues. Subject matter expertise will help build credibility around the program as it matures. Over time, assess the quality of customer service under the current contract terms. If issues exist around speed of response, consider adding a dedicated role to the contract via the current customer service provider or adding performance standards and punitive fees to the contract. These will help with programmatic expansion. Establish a framework in the contract to facilitate reporting about complaints and closed cases.

### MEDIA PRODUCTION

In many cases, the contractor has a dedicated marketing team with on-hand materials that can be tailored to meet the needs of the municipality. Add language to the contract requiring consultation with the municipality to ensure the messaging aligns with municipal goals and addresses any socio-cultural aspects that are unique to the community.

### MEDIA FINANCING

Contractors, in most cases, are the primary financer of marketing materials because of their team capabilities and the city's budget restrictions.

### MEDIA PRODUCT OWNERSHIP

Many products created for marketing the organics program will be specific to the municipality, notably with the municipal seal and any slogans. As such, the media becomes the property of the municipality once it reaches the customer. Use the contract to clearly articulate this expectation and identify whether the municipality will compensate the media producer or not.

## 4. Contamination Control

Much like recycling, it is difficult to filter what residents end up putting in their bins for collection. Setting up accountability and education for both your vendor(s) and residents can help streamline this process. Here are some helpful considerations:

### EDUCATION

The best practice for education is a partnership approach. Consider the elements that each party brings to the table: the municipality has the cultural, political, and socioeconomic knowledge and history, with which it can design the educational campaign; meanwhile, contractors gather data on route performance and have expertise in hauling/processing. If designed as a loop where the municipality establishes the education plan that is consistently improved with data and feedback coming from the contractor, the organics recycling program has a very high likelihood of success across many different metrics.

### CURBSIDE CONTROL

A well-designed organics recycling program has data coming from contractors around contamination. In some cases, there may be little visibility on the sources and common types

of infractions, especially when dealing with smaller towns or haulers with lack of personnel/technology. In these cases, conduct an audit to identify problem areas. If you are "oops tagging" carts for contamination, require the contractor to provide the quantity and type of infraction by route (or more granular, by house) and design engagement materials (email, phone calls, mailers) to reach these homes/areas. If contamination levels are high at processing sites and are reflected in their load rejection rate, gather the route information of the rejected trucks and audit the routes that have the highest levels of contamination. Insert friction upon the hauler (if possible) to increase inspections in those areas via higher rates of curbside spot checks or be more stringent on allowable load contamination levels. Education about what contamination looks like, especially as packaging design becomes more oriented toward circularity, must be ongoing.

### RIGHT TO REJECT

The processor has the least amount of influence on the sources of contamination and the heaviest responsibility to other stakeholders in the market for quality compost. Thus, they should be given authorization to reject loads before and after unloading (certain circumstances will require rapid drops before inspections can occur) and should be given a threshold beyond which the municipality assists with the decontamination efforts (after opportunity to inspect and verify). By tying the municipality into the financing of decontamination, it creates a very good relational and business tool that increases credibility of the entire system. The desire to prevent cash outflows from municipal finances will increase upstream stringency on contaminants. Municipality and contractor must also both keep records of rejected loads with their route information to identify where to target reeducation campaigns.

### BIN SIGNAGE

Require the bin (lid and body) to be a standardized and distinct color from garbage and recycling. Having a uniform color of the entire bin (versus only the lid) will prevent confusion at pickup under low visibility conditions or if the lid is covered (e.g., with snow or ice). While it is advisable to include a list of acceptable materials on the lid, consider the effect of inclement weather. Affix the acceptable materials list on the side or underneath the lid if in an area with snow/ice in winter.

### DECONTAMINATION FUNDING

The contract should identify a contamination threshold beyond which the municipality can help finance. Since the processor's primary source of revenue is attached to the quality of the inputs, which they have little control over, they would greatly benefit from assistance in decontamination above that threshold. Attaching the municipality to the decontamination efforts also gives the municipality "skin-in-the-game" to assist with identifying contamination sources upstream.

### FEES AND INFRACTIONS

The use of fees to prevent continued contamination infractions are a standard practice in contracts. Contractors must be required to keep detailed records of where infractions occur and the number of infractions at an address.

## Considering Adding Compostable Packaging to Your Program? Here's What to Consider During the Contracts Process.

A good contract will establish parameters for contamination control. Typically, the more complex the feedstock is, the more prone it is to contamination. Organics streams that contain compostable packaging are considered some of the most complex feedstocks to manage, due to the variability of products that enter the bin. As such, it's recommended to include a provision in the contract which specifies the type of compostable materials that are allowed and accepted in your program (e.g., compostable packaging must be certified by an accredited third party, like Biodegradable Products Institute, and must be food-contact). Adding specific contract language around compostable packaging can help to safeguard against contamination while encouraging the collection of these materials, which ultimately can help to deliver more food scraps to the composter.

### 5. Environmental Justice

While writing any environmental program's contract, the program's impact to surrounding communities should be considered, regarding infrastructure and accessibility to diverse constituents. Some areas to consider in the contract to address environmental justice, include:

- **HOUSING & COMMUNITY TYPES**
  The municipality should include contract language that identifies serviceable residences as single family and multi family complexes. The vendor(s) is held responsible for conducting outreach for programmatic expansion and identifying barriers to report back to the municipality.

- **DROP-OFF CENTERS (DOC)S AND TRANSPORTATION**
  The municipality should identify how socioeconomic factors such as transportation serve as impediments to participation in composting programs. If DOCs are the only free program in the municipality, managers should consider the distance to the DOC and accessibility. If inaccessible by most common method of transit, use the contract to allow for experimentation or pilot of an in-community DOC to expand program access. A pilot will help gain an understanding of community concerns such as odor or vermin/pests and create action to address them.

- **LANGUAGE AND CULTURE**
  The party responsible for media/marketing is also responsible for creating the media in languages identified by the municipality (aligned with demographics). Use iconography, pictures and colors to overcome language barriers.

## 6. Contract Adjustments

It is an industry standard to have contract provisions that allow rate renegotiation and consumer price index-based adjustments at designated intervals and under extenuating circumstances. Contracts without these provisions are not competitive in the market and are viewed as subpar contracts by service providers. Components to address include:

### RATE RENEGOTIATION CLAUSES

A **must-have practice** includes adding contract language that identifies the period within which a rate can be negotiated in normal circumstances and identifies circumstances under which an urgent or off-cycle rate renegotiation can occur.

### CPI AND FUEL PRICE ADJUSTMENTS

Another **must-have** in the contract is language that identifies the period within which an adjustment can be requested in normal circumstances and identify circumstances under which an urgent or off-cycle fuel price adjustment can occur.

### DURATION OF CONTRACT

It is hard to gauge the success of short-term projects; longer contract terms are more attractive to service providers who can improve the program over time and build rapport with the municipality (and customers). Discussions with private service providers identified a contract term between 3-5 years as a duration that works well for program success. This builds in time to identify pain points for the municipality, customers and service providers, and make program improvements and implement changes in an iterative way that captures the most value for all stakeholders. Longer contracts can also be beneficial, and in some cases required (e.g., if there is an investment from outside the municipality in a facility or equipment). Long-duration contracts can help deepen relationships between a service provider and a municipality that can have positive implications in programmatic success. In cases where a longer contract is the option, municipalities should incorporate language in the contract that enables all parties to come to the table and renegotiate any portions of the contract that may hinder optimal operations. Additionally, if the contractor invests in the land or a facility, the duration must match the payback period of the assets. This is **non-negotiable.**

### SHARED COSTS

Sharing the burden of program expansion or of decontamination is always a good idea. The public-private partnership approach builds trust within the system and cultivates a positive relationship between the municipality and contractor, which has trickle-down effects with the customer and with program improvement.

**CASE STUDY**

# Contract Incentives and Practices to Reduce Contamination in Organics Streams

SAN ANTONIO, TEXAS

A successful organics program integrates the contamination control process across all parts of the chain, starting with the contract. There are many places to create friction in the system around contamination, and municipal leaders must consider the relationship they have with citizens and contractors to identify the best places to assert quality control elements. Start by asking who is best postured to interact with the customer and who in the municipality wants to become the face of the program. The answers help determine where to introduce contamination control and who is best to enforce them.

The municipality of **San Antonio, Texas,** uses several mechanisms to control contamination. It has been the face of the state's waste and recycling programs and has maintained that status with integration of the composting program. Municipal workers are responsible at the front end of the organics program for controlling contamination, which they achieve by conducting curbside "lid tips" to spot check organics bins, using oops tagging on curbside bins that drivers can see, and employing a tech stack for drivers to view and report violations in real time. Drivers are also required to do a co-inspection at the drop sites with the organics processor, placing accountability on the municipality's haulers and producing a method of tracking where contamination generally originates. As a final step in sharing the contamination burden, San Antonio provides financial assistance in the decontamination process for loads that have greater than 5% contamination by volume. This contract language creates an alignment of incentives to control contamination by giving the city "skin in the game."

Source: BioCycle

CASE STUDY

# Load Rejection Contract Clauses: A Mechanism to Support Clean Organics Streams

ANN ARBOR, MICHIGAN

Load inspections that result in rejecting a load pickup are a sensitive matter. Addressing the likely friction leading up to load rejections starts by determining where the approval authority lies. For example, if a processor is authorized to reject loads at the transfer site, establish a procedure such as requiring photo documentation, recording the truck number, driver name and contacting the municipal solid waste manager with the full report within a designated time window.

**The City of Ann Arbor** has updated its load rejection protocol by authorizing the processor to decide if they have not heard from the municipal solid waste manager about how to handle the load within a specified timeframe. WeCare Denali, the contracted processor, and Ann Arbor agreed to add a time constraint to prevent operational holds and create a more permissive environment for the on-the-ground decision maker at the processing site. There is a "reputational hazard clause" in their contract that allows both the contractor and the municipality to "limit or decline acceptance at any time of 'compostable manmade material' based upon characterization, odor, impact on process and/or negative impact on the composting program." This phrase goes beyond typical allowances given to program managers and service providers to reject loads based on contamination alone and extends the ability of both to alter organic streams to account for items that could pose a reputational hazard to the composting program.

Source: Waste Today Magazine

# CHAPTER 4.
# ROLLING OUT COMMUNICATIONS & ENGAGEMENT

CHAPTER 4.

# Rolling Out Communications & Engagement



Clear communication from the very beginning is crucial for a successful and well-supported program. Consistent communication, education and outreach efforts keep your community informed and engaged. When done thoughtfully, these efforts can inspire action and a sense of purpose among community members. The U.S. is experiencing a growing interest in circular practices like organics recycling. By working together, municipalities, composters and even local composting enthusiasts can create a more informed and engaged community around the value of composting.

## In need of marketing materials?

To help you get started, the Composting Consortium has developed communications and marketing materials—including sample social media posts, mailers, stickers, guidelines and more—which can be downloaded for free, for your use.

***Download free marketing materials here!***

## Participation

One of the biggest mistakes a community can make when rolling out a new compost program is to follow the “if we build it, they will come” approach. Participation is not guaranteed; proper participation is the reward to thoughtful program design, strategy and education. Setting out compost bins, even with good signage, will not be enough to ensure that all the food scraps and yard trimmings generated are recovered and that they are free of contamination. The most important strategy to clean compost is a well-educated community who actively partakes in the program.

## Laying the Groundwork

Before creating a communication and outreach approach, assess the communications resources already available for public engagement. This section outlines how to conduct that assessment by providing key questions for consideration. In addition to the materials linked above, the EPA’s Social Marketing Toolkit is an excellent resource for states, territories, local governments, Tribes and nongovernmental organizations interested in creating composting campaigns in their communities.

**Consider existing communications resources:**

**Staff:** Are there communications staffers who can help develop and implement your strategy? Engage them to customize your program's plan.

**Communications platforms already in use:** Does the community already utilize a website, waste management app, podcast, community TV and radio, social media, community newsletter or others? Which staffers are responsible for content on these platforms and how can they be engaged to work on your program's content?

**Partner messengers:** In addition to municipal staff members, who else might be a partner messenger for your program? Are there mission-driven non-profits who might communicate to their networks? Youth groups or schools? Realtors? If there is a commercial compost collection component, consider working with business chambers, restaurant associations and property management companies. **NOTE: Ensure that YOU have control/authority over messaging and education.** If a private hauler(s) is being contracted, be sure to include education requirements in their contract and specify that this task is not up to the hauler's discretion.

**Be clear on target audience(s):**

- Single family households
- Apartment buildings / multi family complexes (MFCs)
- Government buildings
- Businesses that generate high volumes of food scraps (e.g., restaurants, supermarkets, hospitals, etc.)
- All businesses
- Schools
- Underserved communities (e.g. non-English speaking, low-income, elderly, etc.)

**Determine the program's goals and the actions to be taken by the targeted audience, such as:**

- Developing a compost drop-off center
- Launching a curbside compost pilot
- Launching a curbside compost program
- Expanding enrollment in existing curbside compost
- Reducing compost contamination
- Promoting current services and/or facilities
- Educating residents on backyard composting

Once the assessment of existing resources is completed and the targeted audience and goals are established, the next step is to plan your communications and outreach strategy using the following approaches.

## Universal Best Practices

### 1. Prep the community for compost

Before starting any program in the community—whether it's drop-off, commercial compost or residential collections—create "buzz" that compost services are coming using communications tools such as media (e.g., newspaper, radio, etc.) social media, a mailed handout to your service audience or website content. Refer to the collateral checklist in this Blueprint for "pre-rollout" sample content. As the message is crafted, consider the:

**WHO**
Which demographic will be served with this program (e.g., commercial and/or residential)?

**WHAT**
What will be collected?

**WHEN**
When does the program roll out, what is the frequency of collections, will more programs be coming, and if so, when?

**WHY**
Why is composting so important and why did the jurisdiction decide to create this program?

### 2. Emphasize the reasons to compost

Educate the community both at roll out and throughout the program around why composting is important to your community and soils, and why it is critical to keep contamination—especially plastic and glass—out of the bins. Connecting your community to the "why" increases participation. An understanding that this recycled resource is going into soils helps people keep contaminants out more effectively than simply listing materials to keep out of the bin. Some examples of "why" messaging includes:

#### CLIMATE

Organic matter, like food scraps and yard trimmings, is critical to keep out of the landfill because organic matter in the landfill contributes to methane, a potent greenhouse gas. When food scraps are diverted from landfill and composted instead, it avoids methane emissions. When finished compost is applied to soil, it draws carbon out of the atmosphere and puts it back into the soil where it is extremely beneficial.

#### COMMUNITY PRIDE

Especially in communities where messaging around climate may not resonate or be well received, focus on community pride.

#### SUPPORTING THE AGRICULTURAL COMMUNITY

Explain how their actions build a connection to and support for local farms and the agricultural community who benefit from using clean finished compost.

#### WASTE

According to the USDA, approximately 35% of what is sent to the landfill is wasted organic material like yard trimmings, food scraps and food-soiled paper that could have been turned into compost.

#### REDUCED NEED FOR FERTILIZERS AND PESTICIDES

Using compost enriches soil and supports healthy plant growth, reducing or eliminating the need to use toxic pesticides and synthetic fertilizers. Plants grown in compost-rich soil tend to be more resilient to diseases, pests and fungi than those treated with fertilizers.

#### ENVIRONMENTAL JUSTICE

Landfills and incinerators are disproportionately located in low-income communities and communities of color. These facilities adversely impact local air, water and soil quality in these already disadvantaged communities. Diverting organic material from landfills and incinerators to composting reduces the environmental and health burdens on these communities.

An effective tool for community members to understand the "why" is to share the full-cycle story of their food scraps and yard trimmings: where it goes once collected, what happens at the compost facility, what the finished product should look like, and where it goes when it's ready for sale, such as your garden to grow fresh produce and healthy plants—whose trimmings go back in the compost bin.

**3. Introduce the program in phases to build buy-in**
A step-by-step, phased rollout to different demographics one at a time, rather than a new compost program introduced to the entire community (residential, commercial, schools, etc.) all at once is an opportunity to test outreach and engagement strategies. Once the kinks are worked out, pilot participants can provide testimonials to use on outreach materials, videos and more. Make sure the pilot or initial rollout is visible; celebrate successes publicly and timing for the next rollout to build enthusiasm and anticipation.

**4. Keep the message simple and visual for the accepted items**
What goes into the post-consumer collection bin falls in three potential categories, depending on your program:

a. Food scraps only
b. Commingled yard trimmings and food scraps
c. Yard trimmings, food scraps and food-contact certified compostable products.

## Considering Adding Compostable Packaging to Your Program? Here's How Communications Can Help You Succeed.

The Composting Consortium has studied the challenge of contamination at compost sites since 2023. In our latest report, *Don't Spoil the Soil*, we found that, irrespective of a composter's compostable packaging acceptance policy, contamination remains an issue that municipal programs should tailor their programs to support and address. Nearly a quarter of composter operating costs can go towards contamination mitigation, and communication plays a critical role in helping to reduce contamination upstream for residential and commercial participants in your program.

Here are five approaches we recommend municipalities take as they create marketing and education materials for their program:

**1. Minimize the number of words in the graphics and signage and make the guidelines available in multiple languages according to your community's demographics.**

**2. Tailor guidelines by sector as common contaminants vary by generator type. See guidelines by sector in the collateral checklist.** What stays out of the bin is just as important as what goes in, and educating your community around common "look-alike" products, and why they cannot be composted, is crucial. With compostable packaging, it is especially helpful to include real-world images of certified compostable products and packaging so that consumers can visually match the materials with what they see on the bin. Including language around the value of compostable packaging (i.e., to divert food scraps away from landfill) may be helpful.

**3. Make sure the messaging covers common contaminants in compost.** This includes non-compostable bags (customers are used to bagging trash and might imagine that compost facilities will empty these bags, even if they are plastic), plastic-coated paper like coffee cups and plates, glass (often mistakenly placed in compost instead of recycling), and items that come with produce that weren't removed (e.g., produce stickers, rubber bands, tape from bananas, twist ties, etc.).

**4. Make a preemptive communications plan during rollout to address these items.**

### 5. Train community members

In addition to traditional communications collateral (e.g., signage, bin stickers, social media, etc.) to roll out and maintain your program, the best way to shift community behavior is to train "community compost champions" to teach their friends, family and personal networks. Studies show people are far more influenced by those around them than by traditional communications approaches alone. To reach potential champions, consider tapping relevant community groups and those who are going to be most interested in the success of the program. Among the best techniques for encouraging leadership and buy-in are:

• Provide live trainings/workshops (whether in-person or virtual) to local environmental groups, community members who may have been active in passing any compost legislation, community service groups like Rotaries, school environmental and sustainability clubs, and seniors and youth groups. Recruit "Community Compost Champions," who agree to be a liaison in their neighborhood, workplace, place of worship, or other networks, and share their knowledge. Give these volunteers a title, role and keep them informed with regular updates to create commitment and buy-in to sharing the word on composting.

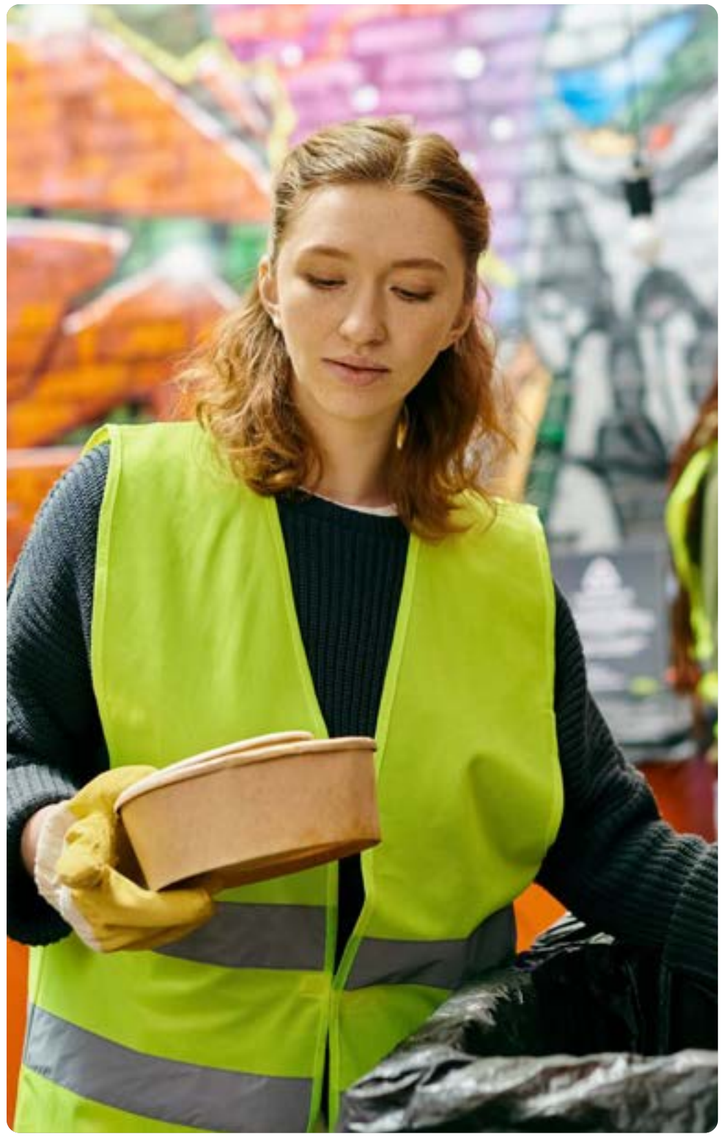
• Include "please share this information" on all promotional material to support the concept of spreading knowledge throughout the community.

• Distribute training or sorting videos that community members can watch and share.

• Have a table at community events. Make the display appealing to passersby using some of these ideas:

**1.** Attract kids with a visible game like a spinning wheel with pictures of items and ask players to tell you whether it can go in a) backyard compost, b) curbside compost, or whether it's c) trash. With kids come adults who will benefit from the exercise. Kids are some of the best trainers for residential compost programs. Unlike adults, kids tend to be very literal and stick to the rules. They also enjoy being empowered to be the expert in their homes.

**2.** Have a jar of clean compost and a sample of contaminated compost to prompt a conversation about how important it is to keep plastic, glass, and metals out of compost.



Source: Envanto

**3.** Have handouts ready and a recruitment pitch and sign-up form for "Compost Champions."

**4.** Have a pledge asking community members to pledge to "compost correctly" once they've been trained at your table, and pledge to share the info with their networks. Those who sign a pledge can enter to win prizes such as finished compost or a CSA from a local farmer.

### 6. Clearly differentiate among carts for all discards—recycling, trash and compost

Ideally compost carts are a different color (typically green or brown) from recycling and trash carts. The differentiation can be very helpful for correct sorting and lends itself to an educational campaign around each color. However, most commercial haulers, and often municipalities, have a branded color for their carts and are not willing to have different colored carts. Having one cart design is also less expensive. If cart color differentiation isn't an option, best practice is to affix stickers on each bin (make sure they are durable and designed for outdoor use) that are different colors, and ideally different shapes. For example, blue square stickers that say "recycle," green round stickers that say "compost," and triangular red stickers that say "trash" or "landfill." This way, those in a hurry or of all reading levels can quickly identify which cart is which and not accidentally use the wrong cart.

Upload printed compost guidelines with a QR code to your website, and include contact information and details on bin delivery. Print guidelines with "please post" written at the top to be delivered and taped to new bins that are intended for the resident to keep. While many programs will try to put guidelines in sticker format or heat stamps on top of or inside compost carts, this is not considered best practice for three primary reasons:

- Users do not sort materials at the bin—once they've arrived at the bin, they do not tend to do further sorting based on information on the bin.

- Stickers wear out very quickly.

- Stickers cannot be easily updated, whereas compost guidelines sent out annually or more frequently, can be.

### 7. Tag violators with "oops" tags or rejection stickers

The next best thing to face-to-face education is stickers placed directly on carts that provide details specific to that home or business's cart. When customers realize that their cart is not anonymous and its contents are seen by the hauler, they understand that what they put in the cart matters and their behavior changes quickly. Requiring haulers to use oops tagging creates a way to

connect with residents. It also helps the municipality track that the service provider is monitoring bins for cleanliness, providing quality collections, and collecting data that can directly inform the efficacy of the program and the messaging that addresses the most problematic contaminants.

Communicate from the very beginning that compost is not the same as trash, that it matters what you put in the bin, and that your hauler is paying attention. Be prepared, especially at the initial launch of a campaign, to have haulers equipped with "oops" stickers and a pen to check the box on what shouldn't have been included, asking to ensure it's not included next time. Ideally, the hauler will track repeat offenders and after multiple "oops" stickers, they can check the box that says, "Your compost cart was not picked up today because it continues to have contamination in it. Please help us keep compost clean!" This data should be tracked (see below) and is extremely important for bins and dumpsters sited at commercial and multi family customer sites.

Consider a positive "Thanks for keeping compost clean" or "We caught you composting correctly" message and campaign for those doing a great job. Addresses can be put into a drawing each month to win prizes like a CSA membership or produce basket from a local farmer or for finished compost for use on gardens, etc. This is a fun campaign to build press and social media to generate visibility about the importance of keeping compost clean and encouraging behavior with a reward.

### 8. Track progress with real data

To know whether the program is authentically generating clean, usable compost, it's critical to have the data on what percentage of materials are being rejected at the site of the generator or at the compost facility. Track the most common contaminants in the bin and make sure the data is shared with those shaping the ongoing messaging to target challenges and goals.

### 9. Make your compost program circular by encouraging the use of finished compost

The community and environmental benefits of a compost program can only be realized if finished compost is used. Consider holding sporadic compost giveaway days at a very visible location, like a compost drop-off facility or park, to get more people interested in using finished compost. Of note, these events can be useful marketing tactics to gain new compost users/customers, but finished compost should not to be given away regularly, as it devalues the product.

## Best Practices by Sector

### Schools And Libraries

Providing education in schools at the same time the compost program is rolled out in the residential sector is a great way to reinforce educational messages. Make sure the messages are age-specific depending on school level (i.e., an elementary school would have very different signage than a high school).

### Single family

**1. Start with backyard composting:** Keeping compost as "local" as possible is best. Backyard composting education is especially useful in rural communities where curbside collections may be more expensive or difficult and where yards are larger, and may be more conducive to gardening and setting up backyard bins. When rolling out a backyard compost campaign, include messaging on:

- Backyard composting 101: Keeping your organic matter like food scraps, grass clippings and leaves at home for backyard composting is easy and helps build finished compost for use in your own flowerbeds, gardens and lawns.

• Why curbside composting is a great supplement to backyard composting: Not everything that is compostable can go in your backyard compost. Food scraps like bones, meat and dairy do not break down well in a backyard compost bin and will attract pests and wildlife. Tree limbs also do not break down in the backyard compost and it's important to put noxious weeds in a curbside cart rather than a backyard compost bin. Industrial compost facilities achieve higher temperatures than a backyard compost bin and are therefore able to achieve pathogen destruction, and to render noxious weeds inert.

**2. Rolling out a curbside compost program:**

• Send utility bill inserts, online newsletters, mail letters with announcements and guidelines informing residents that the program is coming.

• Deliver carts with guidelines and a "how-to" attached. The guide could include a thank you for participating, with an emphasis on the following messages: the new cart is a soil maker, not a trash receptacle; tips on storing food scraps in your home (e.g., use provided kitchen container or your own counter); keeping your bin clean (e.g., options for using a paper bag or liner bag); FAQs addressing concerns like pests, odor, etc.; when to roll the cart out; a heads up to look for feedback from "oops" tags and how to avoid bin rejection; help spread the word and volunteer as a compost champion; learn more at website/app.

• If program is opt-in, consider hiring a canvasser to go door-to-door with a "how-to" kit and a signup.

**3. Keep the messaging going year-round, every year, to boost participation and prevent contamination:**

• Ongoing education keeps the program front and center to residents who may not be participating or have stopped participating.

• "Keep compost clean" campaign helps highlight that clean compost is central to program success.

• Plan/budget to send tips, guideline reminders, resources like "is it compostable?" handout, and FAQs, on a regular basis (ideally monthly) to customers to keep them engaged and alert to guidelines.

### Commerical Properties

**1. Make messaging as accessible as possible:** When rolling out a commercial program, do not rely on written correspondence alone to educate businesses on the new program or the new requirements for businesses within the jurisdiction. There are several best practices, including in-person visits from municipal staff, instructions on bin set up, tips on source separation, premade signage relevant to that businesses's compostable discards, and on-site employee trainings. Handouts should be in multiple languages tailored to the community's demographics. Ideally, the training staff is bilingual or accompanied by a translator when needed.

**2. Communicate the strategy for keeping compost clean:** In trainings, include a process for addressing material that is too contaminated to be hauled as compost. This can include cleaning out contamination for hauler to return and haul it as compost, or having it hauled as trash and notifying all staff as to the specific issue that caused the material to be rejected. Articulate these choices in a handout with a contact from the hauler.

**3. Provide training videos:** Training videos on properly sorting compost (particularly back-of-house) and requiring all new employees to watch the video as part of their onboarding training is key to keeping up with employee turnover. One best practice is to also supply a sorting game at the end of the video to test an employee's knowledge. See examples at https://ecocycle.org/guides-and-resources/popular-tools/sorting-game/ and https://boulder.recycle.game/.

**4. Start with back-of-house collections at restaurants, cafes and kitchens before moving to front-of-house:** The back-of-house is where the vast majority of organic discards are generated, and because a limited number of people have access to the bins, the quality is easier to control. Once moving to front-of-house, customers are very likely to contaminate compost bins.

**5. Tailor signage/guidelines according to the specific business's materials:** Guidelines at businesses are not one-size-fits-all. Prepare compost guidelines for types of food service companies, such as cafes (particularly with compostable coffee cups), fast food restaurants and others. Back-of-house recycling guidelines should include latex gloves as a clear "no." They are one of the most common contaminants from this source.

**6. Recruit a compost champion within the businesses:** One person who cares—and that may be the CEO or a cashier—can be key to keeping the business engaged and informed. Send this contact regular content, especially regarding keeping contamination out.

**7. Notify customers of "oops" tagging practice at rollout:** One person who cares—and that may be the CEO or a cashier—can be key to keeping the business engaged and informed. Send this contact regular content, especially regarding keeping contamination out.

### Multi Family Complexes (MFCs)

**1. Property manager buy-in:** Identifying an individual at the MFC as the primary contact on site is needed to make decisions around siting bins/enclosures and putting up adequate signage, ideally in an enclosure.

**2. Have an onsite champion:** MFC education and rollout can be greatly supported with someone onsite who can help educate fellow residents and monitor contamination in the organics bin. Invest the time to do one-on-one training with a champion to make sure they understand the program and their role.

**3. Before rolling out a program:** Send an introductory letter to all residents detailing that a new compost bin(s) is coming, its exact location (a map is useful for larger complexes), details as to what can go in the bin and what can't, and that the bin may have to be removed if it is not used appropriately.

**4. Establish communication systems:** Determine how the property manager typically communicates with residents (e.g., rent notices), common areas that might be used for education, and whether there are group events that could serve as training opportunities.

**5. Consider earned access to bins for compost:** The organics stream is difficult to keep contamination free, and in the context of an MFC, just one resident's mistake of throwing garbage in a compost bin can ruin the efforts of the rest of the tenants. One approach is to have a dumpster or cart that can only be accessed with a code. Residents receive the code when they attend a training on how to compost and sign a pledge to participate correctly.

# CONCLUSION

## A Zero Waste Future Begins Today

**By following this comprehensive, four-part approach in this blueprint, municipalities can establish effective organics recycling programs that divert organic materials from landfills, reduce greenhouse gas emissions and create a more circular economy.**

We encourage you to actively engage with stakeholders across the composting value chain—including residents, schools, businesses, restaurants, policymakers, regulators, haulers, compost manufacturers and others.

**By working together, we can transform food scraps into a valuable resource, enrich our soils and create a more circular future for our communities.**

Source: Envanto

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