



# Implementing a Multifamily Recycling Challenge in Your Community

Insights and Best Practices from Atlanta, GA



## Acknowledgements

This guide was made possible through the contributions of the many stakeholders named throughout this document as well as funding support from The Coca-Cola Foundation.

The work to improve the recycling system can only be achieved through collaboration and partnership.

# Table of Contents

## Introduction

- 5 City of Atlanta Multifamily Recycling Ordinance
- 5 Opportunities and Challenges

## Pilot Projects

- 7 Overview
- 9 7 Steps to Measuring Volume
- 10 Reference Guide for Measuring Volume
- 11 Cost Breakdown
- 12 Timeline

## AMLI Residential

- 13 Implementation
- 13 Outcomes
- 14 Takeaways

## Gables Residential

- 15 Implementation
- 16 Outcomes
- 21 Takeaways

## Pilot Conclusions

- 22 Data/Training/Logistics
- 23 Educational Materials

## A Multifamily Challenge

- 24 Program
- 28 The Power of Partnership
- 31 Participating Property Experience
- 33 Outcomes
- 35 Takeaways

## Kick-start Your Efforts to Reduce Waste in Multifamily Properties

- 36 Tools

## Appendix

- 36 Challenge Implementation

## Introduction

# Building Stronger Multifamily Recycling Programs

This guide is a continuation of the work presented in The Recycling Partnership’s [Guide to Multifamily Recycling](#). This volume presents the tools produced and lessons learned first from a pilot project in Atlanta, then applied in a broader pilot challenge program ([Do You Recycle? Challenge](#)). The pilot project and program were built from the guidance provided in the founding Guide to Multifamily Recycling to develop its strategy, including utilizing messaging assets, informing stakeholders, performing measurement, expanding dedicated staff to support initiatives (Orlando, Florida), providing clear signage (Orlando), involving stakeholders early and often (Tacoma, Washington), and providing options for transcreated materials (Tacoma). The Atlanta approach described in this guide demonstrates a voluntary engagement strategy for multifamily properties (as opposed to a policy enforcement strategy). It should be stated clearly that while the tested approach was not associated with the enforcement of the City of Atlanta’s policy, the city did and does require multifamily properties to provide recycling to residents.

**TRANSCREATION (TRANSLATION + CREATION): IS THE ACT OF CHANGING A TEXT TO MAKE ITS MEANING CULTURALLY APPROPRIATE FOR A TARGET MARKET. TRANSLATION: IS THE VERBATIM TRANSFER OF TEXT FROM ONE LANGUAGE TO ANOTHER. <sup>1</sup>**

The work presented in Atlanta was part of a multi-year system focused grant program that spanned single-family, multifamily, and university interventions across the city. It was made possible through a more than \$4 million grant by The Coca-Cola Foundation with the purpose of building and implementing the strategy for a model recycling city.

The intention of this toolkit is to provide lessons and replicable tools for multifamily communities to use in pursuit of improving recycling outcomes nationally.

“The multifamily aspect of the Atlanta project represented an incredible opportunity to serve a large population of the city alongside a diverse and dynamic set of stakeholders and variables. The solutions we practiced were a combination of tried-and-true engagements and a new suite of approaches aimed at better understanding how to scale equitable recycling access and education for multifamily communities more effectively and efficiently.” — Cecilia Shutters, Senior Program Manager, The Recycling Partnership

<sup>1</sup> What is Transcreation? | [unitedlanguagegroup.com](http://unitedlanguagegroup.com)

# City of Atlanta Multifamily Recycling Ordinance

## City of Atlanta Multifamily Recycling Ordinance

The city requires recycling access at all multifamily properties through the Multifamily Recycling Ordinance, though not all properties are maximizing recycling as an amenity. According to the city’s website, “The City of Atlanta Code Section 130-38 states that the owners of any multi-family dwelling, including public housing, consisting of six or more living units, or the owners’ association of condominiums or townhouses consisting of six or more living units, shall furnish commercial containers for the collection of recyclables, including, at a minimum, the materials the city collects as part of its curbside recycling program, which materials include glass, plastics, newspapers and aluminum cans.”<sup>2</sup>

## Opportunities and Challenges

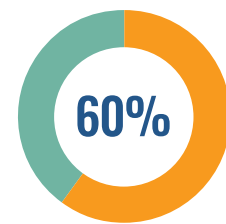
This ordinance defines the minimum requirements for what properties should be providing; however, most properties need help to achieve compliance and could use assistance to improve education and access to recycling for residents. The pilot projects and *Do You Recycle? Challenge* acknowledged the existence of the ordinance in their orientation but decided to test a voluntary engagement method rather than a compliance mechanism due to limited resource capacity for ordinance enforcement from the city at the time. That said, participating properties may have been better equipped to achieve compliance because of the requirement to have recycling service to participate in the program (or challenge).

ATLANTA HOUSING  
IN 2020:

1,500  
MULTIFAMILY  
PROPERTIES



140,000  
INDIVIDUAL  
HOUSING  
UNITS



OF CITY'S  
HOUSING STOCK

<sup>2</sup> Multifamily Recycling | [atlantaga.gov](http://atlantaga.gov)

## Challenges

**TURNOVER:** High resident and property management turnover rates

**INCONSISTENCY:** If multifamily properties are serviced by private haulers (as Atlanta is), there can be inconsistent lists of accepted materials depending on individual contracts and based on the variety of materials recovery facilities to which haulers take material

**SPACE:** Lack of adequate space for recycling collection receptacles, both for residents and haulers

**MEASUREMENT PRIORITIES:** Competing priorities for property management in tracking and measuring recycling progress

**MEASUREMENT:** Difficulty measuring the tonnage and contamination for each individual unit given centralized collection and different properties' recyclables being mixed in as part of a larger group of pickups for the hauler

**SIGNAGE:** Lack of consistent and updated signage across properties

“The *Do You Recycle? Challenge* provides the tools, resources, and assistance to help properties engage residents in a more comprehensive way. It created a much-needed push to support better recycling in the multifamily space, which had not been tackled at this scale before in Atlanta. Improvements like this benefit the city as well as the state’s larger recycling economy.” — Gloria Hardegree, Executive Director, Georgia Recycling Coalition

## Opportunities

**EFFICIENCY:** collecting from multifamily properties can be more efficient than traditional curbside recycling collection.

**EDUCATION:** Point source educational distribution that can reach many residents quickly and easily

**CONSISTENCY:** Consistent messaging and alignment across whole portfolios that include multiple properties/buildings

**MONITOR:** Centralized collection sites that can be monitored

**DOORSTEP INTERVENTIONS:** The possibility of individual residential unit data and educational interventions using doorstep (also known as valet) waste and/or recycling pickup services

**LESS TRASH:** Cost-savings potential thanks to reduced need for trash pickup

**ADDITIONAL AMENITIES:** Value to potential new residents in terms of improved sustainability amenities

**THE DO YOU  
RECYCLE? CHALLENGE  
PROVIDES THE TOOLS,  
RESOURCES, AND  
ASSISTANCE TO HELP  
PROPERTIES ENGAGE  
RESIDENTS IN A MORE  
COMPREHENSIVE WAY.**

# Pilot Projects

The project began with the intention to engage 12 properties over three years to improve recycling access and education and to test engagement strategies. We decided to start with two property groups, Gables Residential (Gables) and AMLI Residential (AMLI), both of which actively include sustainability as part of their brand. They agreed to work with us to test, measure, and provide candid feedback about what works and what does not.

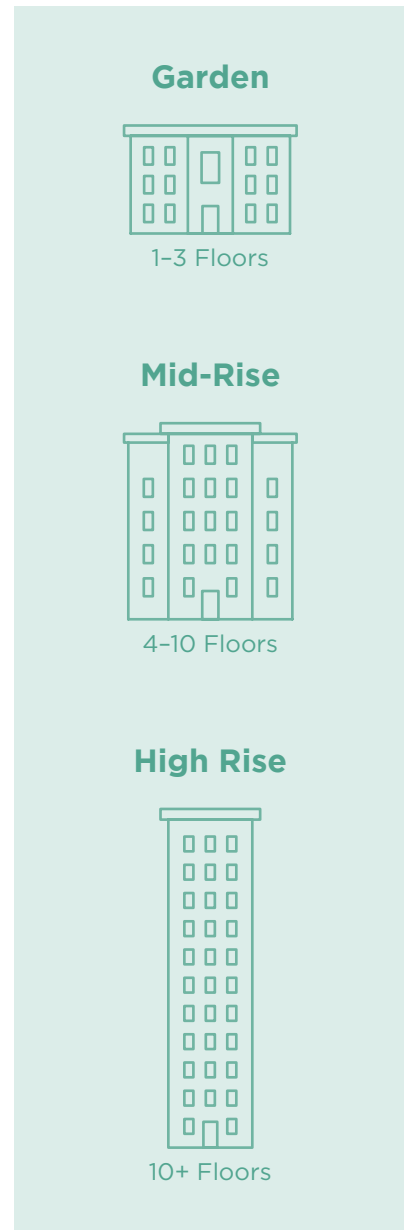
Both groups have multiple properties within the City of Atlanta. AMLI committed nine of its communities in the pilot, and Gables committed three of its communities. While each property presented unique attributes in design, location across the city, and existing recycling participation, the majority of these 12 properties can be characterized as mid-rise<sup>3</sup> class A<sup>4</sup> properties commanding market-rate rents.

## General Pilot Design

The format for both property groups followed the same protocol but ultimately differed slightly in implementation. In this toolkit we describe the general campaign approach that both took, the individual approaches employed, and the outcomes from the pilots. In both cases, properties agreed to follow a minimum of an eight-week protocol that included training, pre- and post-measurement, and delivery of a variety of educational materials.

<sup>3</sup> Public Works | [atlantaga.gov](http://atlantaga.gov)

<sup>4</sup> The Atlanta Apartment Association defines class A multifamily buildings to be typically less than 10 years old, located in a central business district or desirable neighborhood, with high-end exterior and interior amenities and materials.





## Educational Materials

The Recycling Partnership created design templates of a tote bag, info card, door tag, and signage (see page 25) for participating properties and covered the cost to design, print, and deliver these materials. The timeline showcases the intention to use these educational materials in sequence to continuously engage residents throughout the campaign period. Properties also sent emails before beginning the campaign to outline campaign details and supplemented educational materials with social media posts and digital banners with unique company branding in lobby and elevator areas. Info cards were placed in tote bags and distributed directly to residents by property management staff over a weekend, though info cards could be separated and distributed via mailboxes if preferred. Door tags were distributed in a similar fashion over the course of one or two days.

## Measurement Protocol

This pilot employed a low-tech approach to gathering participation and contamination data. This simple approach is something any property can implement. (Manual volume measurement tracking sheet in tools section). The approach required an on-site staff person to manually record on paper a volume reading (see the Reference guide for measuring volume in tools section) as a measure to be converted into weight<sup>5</sup> and to represent a measure of participation. Additionally, a photo of each receptacle was taken to corroborate the volume reading and to provide some evidence regarding contamination (though contamination was recorded as its own measure in this pilot).

Properties labeled each receptacle with a number on a piece of tape to ensure readings were taken from each of the receptacles consistently. Data was entered into a prescribed paper spreadsheet, which made it clear for the person measuring to know what needed to be filled in. Measurements were taken before each scheduled haul for the entire eight-week period. While the process was generally easy to follow in its low-tech application, it was recommended that future iterations should incorporate higher-tech solutions like an app, designated devices for recording measurements, and the ability to record more specific information about contamination.

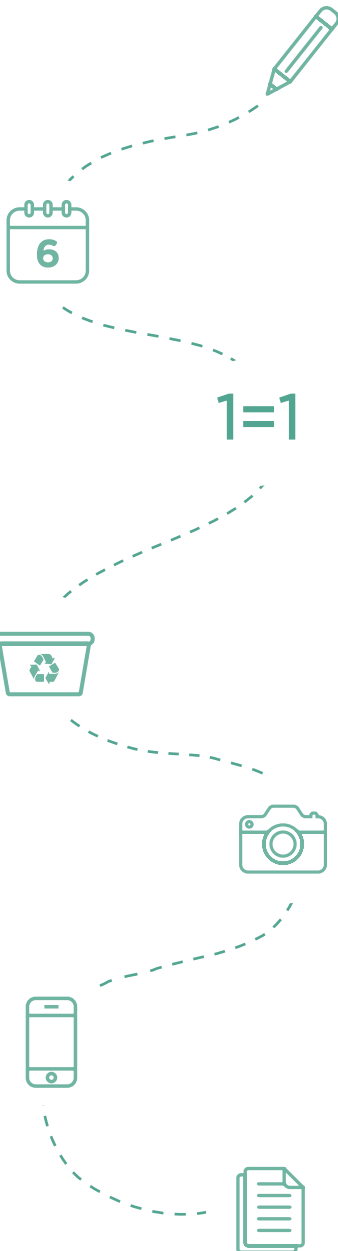


<sup>5</sup> Weight conversion factors | [epa.gov](https://www.epa.gov)



# 7 Steps to Measuring Volume

## Multifamily Recycling Pilot Program



**Write** your name on the Manual volume measurement tracking sheet (see tools section).

**Check** the date to make sure it is the date you're measuring.

**Confirm** that the number on the container matches the number on the sheet.

**Note** the fullness of the container (see the Reference guide for measuring volume in tools section).

**Take** a photo of the container's fullness (with either the container number visible in the picture, or note the container number in text along with the picture).

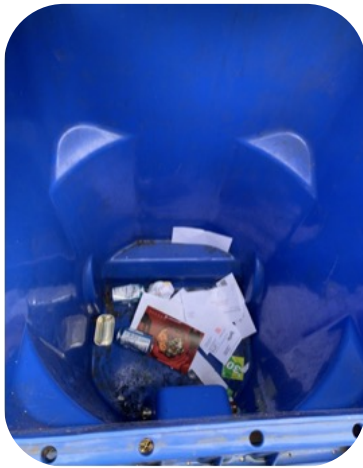
**Text** the photo (with property name and container number) to the phone number designated to receive this information.

**Move** to the next container to complete the measurement tracking sheet for that day.

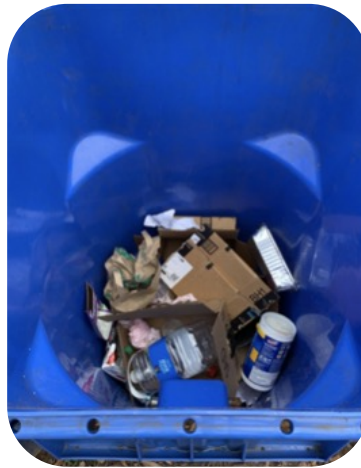
# Reference Guide for Measuring Volume

## Multifamily Recycling Pilot Programs

Empty



1/4 Full



1/2 Full



3/4 Full



Full



## Cost Breakdown

The pilot project's printed materials cost \$17,405.96. Below is a breakdown of each educational component and its cost as well as a calculation of the per unit price for each property group. The Gables price per unit is higher because the participating properties introduced a new suite of unified and consistent recycling signage, whereas AMLI already had consistent signage implemented across its properties. This pricing may vary based on printer and region, but it provides a sample figure that can be used for an education campaign.

AMLI	Unit Count	Total Cost
Tote Bags	3,500	\$8,641.21
Info Cards	3,500	$(.25) \times (3,500) = \$875$
Door Tags	3,500	$(.35) \times (3,500) = \$1,225$
Signage	0	
Totals	3,500	\$10,741.21
Price Per Residential Unit (approx. 3,500 units)	3,500	-\$3.07/unit
Gables	Unit Count	Total Count
Tote Bags	1,200	\$3,264.75
Info Cards	1,500	$(.25) \times (1,500) = \$375$
Door Tags	1,500	$(.35) \times (1,500) = \$525$
Signage	78	$(32.05) \times (78) = \$2,500$
Totals	1,500	\$6,664.75
Price Per Residential Unit (approx. 1,000 units)	1,000	-\$6.66/property

## Timeline

Each property was asked to ensure new signage and/or new recycling receptacles were in place before launching the training and education campaign.

Training and Baseline Measurements	
<b>Week 1:</b>	Initial overview and training for all property managers and associated facilities team to review the campaign, the measurement process, and logistics as well as to provide space for questions via the training webinar.
<b>Week 2:</b>	Baseline measurements of all recycling collection sites (see more specifics on this process below).
<b>Week 3:</b>	Baseline measurements continue and resident notification email.
<b>Week 4:</b>	Baseline measurements continue.

Resident-Facing Education Campaign	
<b>Week 5:</b>	Recycling measurements and tote bag distribution with info card.
<b>Week 6:</b>	Recycling measurements, email reminder, and social media post.
<b>Week 7:</b>	Recycling measurements and door tag distribution.
<b>Week 8:</b>	Recycling measurements and resident survey.
<b>Week 9:</b>	(Optional) Last week of recycling measurements.



# AMLI Residential

## Reducing Contamination and Increasing Recycling Through Education and Engagement



**AMLI Residential's stated goals for the pilot included:**

**Reduce contamination** and increase recycling rates by engaging and educating residents

**Measure recycling** to help:

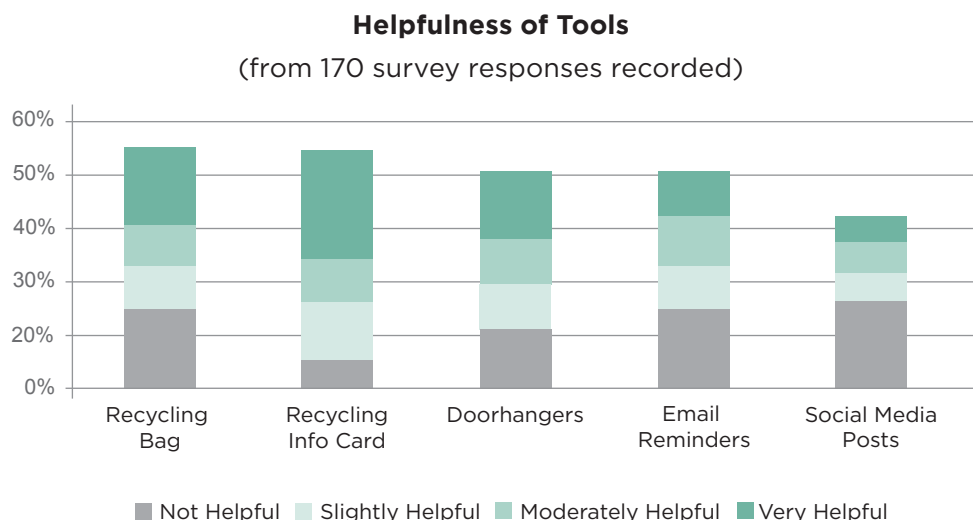
- Evaluate recycling capacity
- Identify contamination culprits
- Measure the effectiveness of engagement tools

### Implementation Details

AMLI's campaign consisted of nine properties and represented 2,973 individual residential units. The campaign opted out of introducing new separated glass recycling as part of the pilot due to space and time constraints.

### Outcomes

A post-campaign resident survey revealed:





## Recycling Participation

(from 173 survey responses recorded)



Recycled more or started recycling for the first time.



Recycled the same amount.



## Recycling Knowledge

(from 169 survey responses recorded)



Did not learn from these tools.



Learned some items they had been placing in the trash are recyclable.



Learned some items they had been recycling should go into the trash or a specialty recycling bin.



## Recycling Confidence

(from 169 survey responses recorded)



More confused about recycling in their community.



More confident about recycling in their community.

## Takeaways

**Educational tools** were useful in driving better recycling habits.

**Tangible education materials** were more successful than digital communications.

**Three key areas** to focus on in the future:

- Recycling Orientation at Move-In: In both this survey and AMLI's Sustainability Living Index, residents expressed confusion about where bins are located, how valet waste is operated, and what can be recycled. AMLI could address this by incorporating more engagement into the move-in process and adding a flyer in the move-in packet.
- Doorstep waste and recycling collection: Many of the comments dealt with issues regarding valet waste. This is an area that deserves more focus going forward.
- Specialty Recycling: There continues to be high demand for glass recycling and other types of specialty recycling. AMLI should continue adding specialty recycling items and exploring opportunities to further expand waste diversion programs.





# Gables Residential

## Initiatives Impact Quality and Quantity of Recycling

**Gables Residential's stated goals for the pilot included:**

**Investigate** how different types of recycling initiatives impact the quantity and quality of recycled materials

**Determine** if the pilot was effective at increasing recycling

### Implementation Details

The Gables campaign consisted of three properties and represented nearly 1,000 individual residential units. The campaign opted to introduce new separated glass recycling as part of the pilot. The initiatives were rolled out in a staggered fashion based on the following timeline:

Key Dates	Item
04/26/21	Signage installed, bins numbered, glass bins delivered
05/3/21	Bag distribution with info card, social media
05/10/21	Email resident reminder letter and social media
06/18/21	Door tag reminder
10/21/21	Final resident survey

Photographs of the recycling bins were taken weekly at three Atlanta properties. The photos were visually inspected, and EPA volume-to-weight conversion factors were applied to determine the approximate weight of mixed recycling, cardboard, and glass per property each week. The pilot ran from late April 2021 to early July 2021.

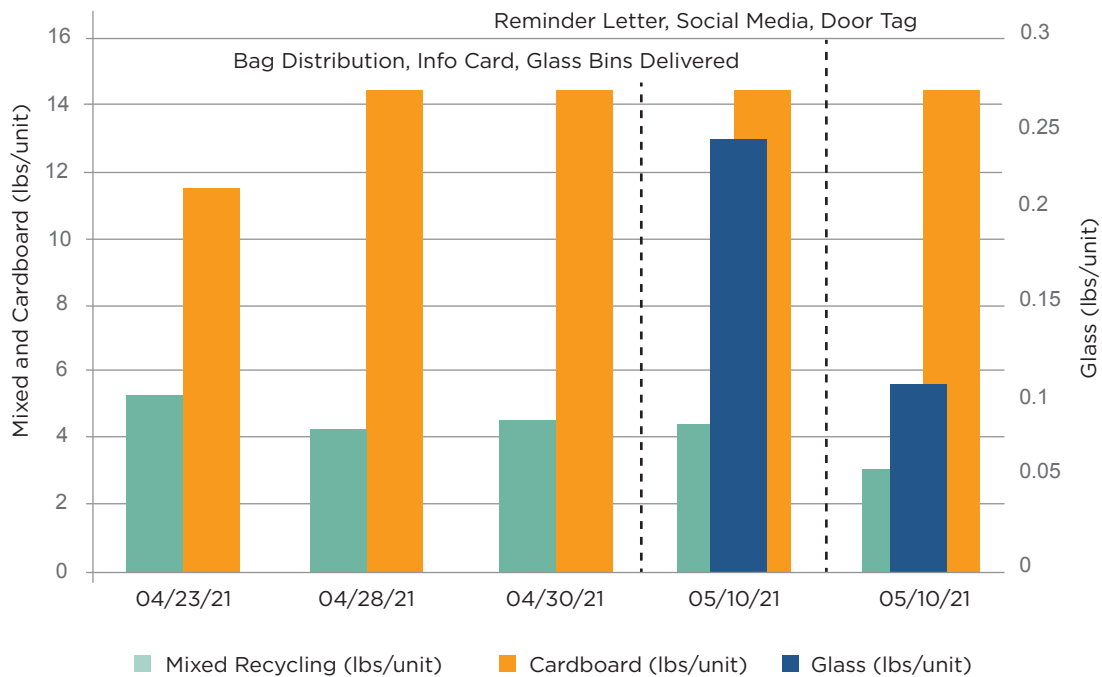


## Outcomes

### > Property 1

The quantity of recycled material was not correlated with time elapsed. This property had a very small sample size (only five observations), which means there was not enough data to accurately analyze trends. As such, the effects of the pilot at property 1 are inconclusive.

Atlanta Waste Pilot - Gables Property 1 Recycling



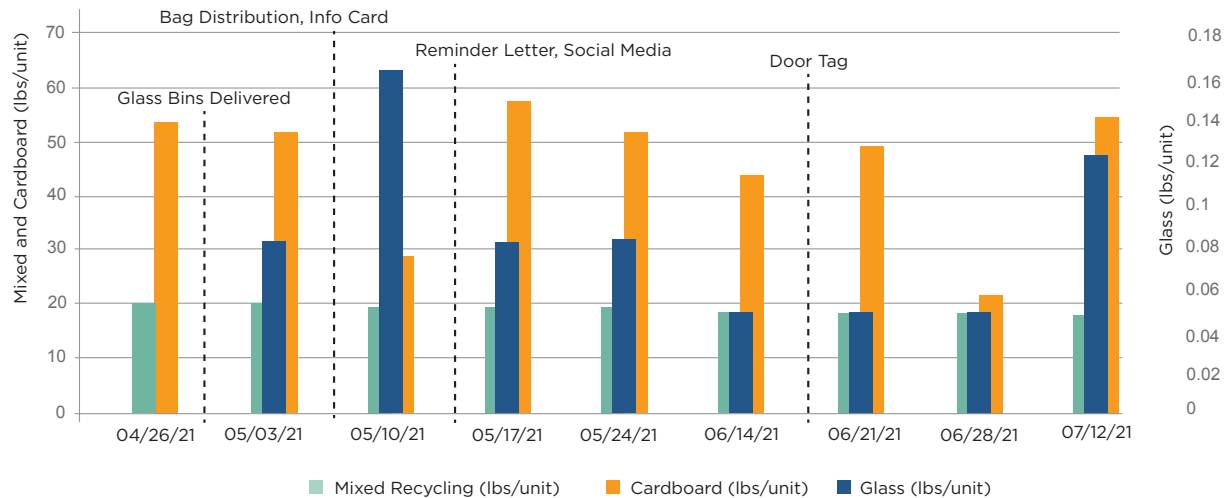
### > Property 2

The quantity of recycled material was not correlated with time elapsed. Importantly, mixed recycling (mixed paper, plastic, and metal) (~19 lbs./unit/week) and cardboard recycling (~45.5 lbs./unit/week) were disproportionately high at property 2 compared with that of the other two properties. This can reasonably be attributed to property 2 being in lease-up when the pilot took place. The property went from under 85% leased to over 90% leased over the course of the pilot.

**THE TIMING OF MOVE-INS IS PERHAPS THE BIGGEST FACTOR INFLUENCING RECYCLED MATERIAL QUANTITY (ESPECIALLY CARDBOARD).**

The timing of move-ins is perhaps the biggest factor influencing recycled material quantity (especially cardboard), and since a large-scale move-in at property 2 coincided with this pilot, the results are skewed. Furthermore, residents who just moved in may have been unaware of the new recycling program or may not have received the email reminders. For these reasons, the effects of the pilot at property 2 are inconclusive.

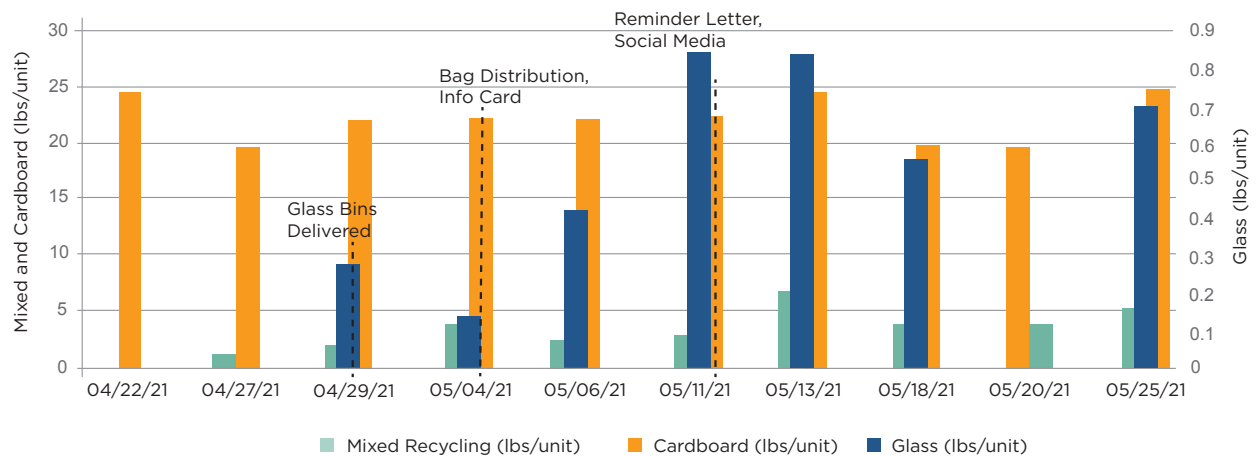
### Atlanta Waste Pilot - Gables Property 2 Recycling



### › Property 3

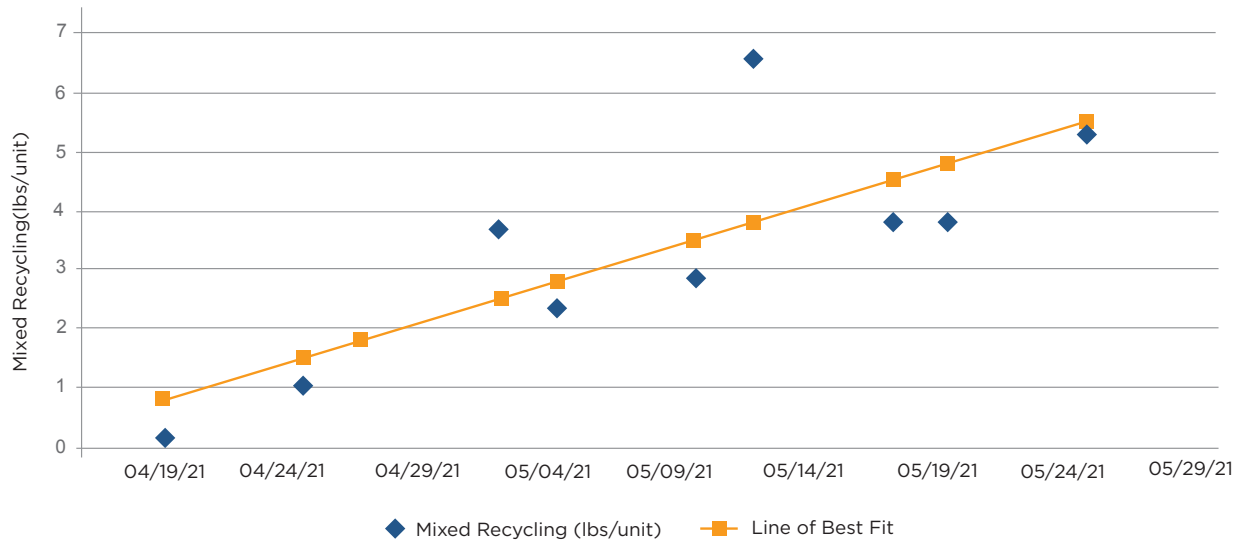
There was a moderate correlation between the quantity of mixed recycling (mixed paper, plastic, and metal) and time elapsed in the pilot. Property 3’s total mixed recycling increased at an average rate of 1 lb./week during the pilot time frame as illustrated below:

### Atlanta Waste Pilot - Gables Property 3 Recycling



At property 3, the pilot did increase the quantity of mixed recycling. Also, unlike properties 1 and 2, property 3 had a larger sample size of 10 observations and did not face the issue of fluctuating occupancy levels, which increases the confidence in the causal relationship observed at property 3.

Gables Property 3 Mixed Recycling vs Time



## Resident Survey Results

Residents were asked to rate the helpfulness of each initiative on a scale of 1 to 5, where 1 = least helpful and 5 = most helpful. Recycling bags were perceived as the most helpful component of the recycling program with a mean score of 3.29. Conversely, door tags were the least helpful with a mean score of 1.93.

Item	Mean Score
Recycling tote bag	3.30
Recycling signage	3.14
Info card	3.11
Email reminders	2.09
Social media posts	1.95
Door tags	1.93



STATED THAT “MORE EXPLANATION OF WHAT CAN BE RECYCLED” WOULD IMPROVE RECYCLING OUTCOMES THE MOST.



STATED THAT HAVING “MORE RECYCLING BINS OR LARGER RECYCLING BINS AT THE COMMUNITY RECYCLING CENTERS” WOULD IMPROVE RECYCLING OUTCOMES THE MOST.

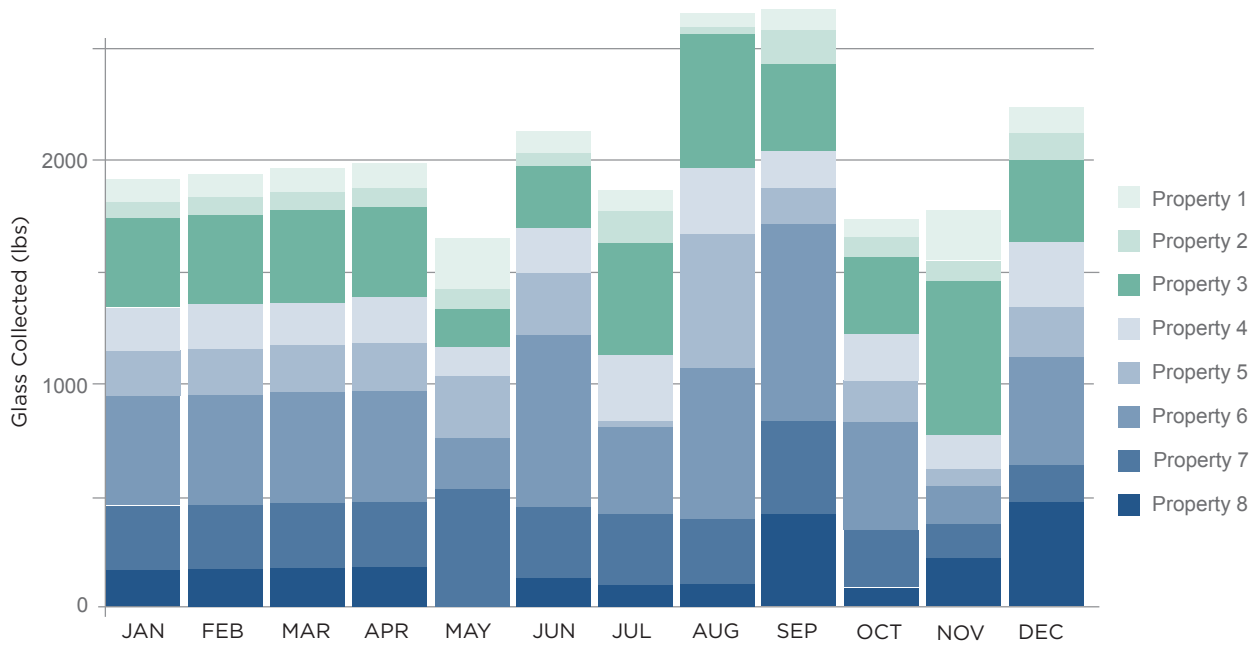
## Glass

Glass is a material that is not accepted in single-stream service provided to Gables properties in Atlanta, as is the case for most multifamily properties in the city. Gables was able to introduce separated glass recycling to eight Atlanta-area properties, three of which were part of the pilot program, through a grant provided by The Recycling Partnership and the [Glass Packaging Institute](#). Separated glass recycling is now a permanent part of the recycling process at these Gables properties thanks to this effort.

Monthly glass collection data in pounds was gathered from the eight Atlanta-area Gables properties between May and December 2021. To estimate the glass collected for the entire year of 2021, a model considering two relationships—between glass collection and month, and between glass collection and property—was used to predict the amount of glass collected between January and April.



## Atlanta Glass Pilot – Glass Recycling in 2021



The 2021 glass collection data was analyzed in relation to the 2020 waste metrics to understand the preliminary effects of offering glass collection on overall recycling. The key findings are as follows:

**4.2% increase** in overall recycled materials collected (tons).

**Average increase** of 9.8lbs./unit/year in glass recycling across the seven properties.

**Two standout properties:**

- **Property 7**—12% increase in recycling.
- **Property 4**—10% increase in recycling.

**CONSISTENT DATA COLLECTION IS CRITICAL TO UNDERSTANDING THE RELATIONSHIP BETWEEN EDUCATION AND IMPACT TO IMPROVE RECYCLING.**

## Takeaways

Pilot effectiveness

- **Property 1:** Inconclusive, data is too limited (five weeks only) for accurate assessment.
- **Property 2:** Inconclusive, data is unreliable because pilot coincided with lease-up.
- **Property 3:** Yes, recycling increased during the pilot.

**Recycling bags and signage** were rated as the two most helpful elements of the pilot in the survey.

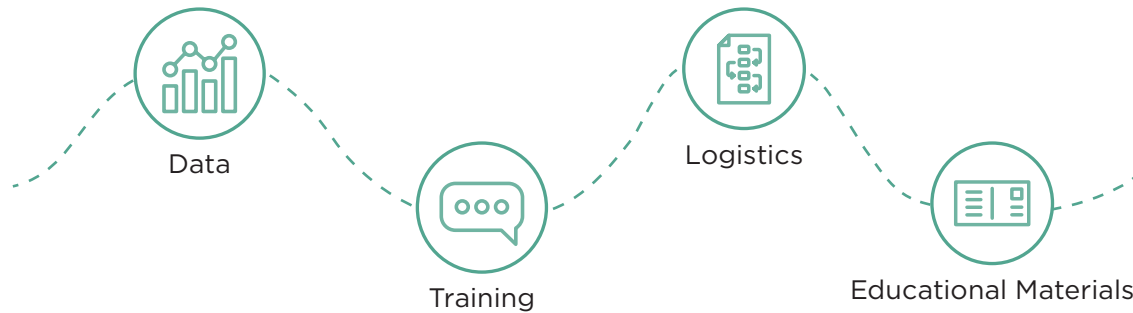
**Three key areas** to focus on in the future:

- For analytical purposes, there should be at least three (but more, if possible) observations between initiatives (e.g., take baseline observations for three weeks, deliver bags, take observations for three weeks, send out reminder emails, take observations for three weeks, and so on). In this pilot, initiatives were rolled out in consecutive weeks in some cases. If there were three observations between initiatives, it would be possible to assess the effectiveness of each initiative individually and not just answer “overall, did the pilot increase recycling?”
- The lease-up periods can impact measurement outcomes and reflect atypical recycling behavior compared to more stable lease periods. Education campaigns can still occur during leasing periods.
- Given glass is not collected typically in single stream for multifamily properties in Atlanta. Adding separated glass recycling service increased the total amount of recycled materials by weight and allowed glass to be diverted from landfill while providing recycled glass to the more than 100 Georgia manufactures that depend on those materials to make consumer products.

“The pilot’s measurement and verification process was a benefit to Gables by helping us collect data (photos and measurements) to report the recycling needs of each community. This information helps us to better manage the recycling effort and related-expenses as well as identify outreach and education needs through better visibility into the materials recycled and contamination in our collections. We found the approach so helpful in fact that we used the measurement and verification approach at three more communities located in Austin, San Diego, and metropolitan [Washington] D.C.” — Juliette Apicella, Director of Sustainability, Gables Residential

**WE FOUND THE APPROACH SO HELPFUL IN FACT THAT WE USED THE MEASUREMENT AND VERIFICATION APPROACH AT THREE MORE COMMUNITIES LOCATED IN AUSTIN, SAN DIEGO, AND METROPOLITAN [WASHINGTON] D.C.**

# Pilot Conclusions



Upon completing the pilots, the grant funds allowed for lessons to be scaled to reach more properties across the city. Several of the key takeaways informed the structure of what became the *Do You Recycle? Challenge* described below.

## Data

**Ensure property management** is well versed in how to collect data and why it is important. Consistent data is critical to understanding the impact of a campaign like this.

**Feedback from property managers** suggested the need to explore a more user-friendly way to collect data. This information led to the development of an app built for that purpose, which was piloted in the *Do You Recycle? Challenge*.

## Training

**Provide training for property managers and facilities staff** to ensure the whole team is on the same page and ready to deploy the campaign at least a full week ahead of pre-measurement.

**Provide a clear, single channel** for ongoing communication with properties throughout the pilot to deal with issues before they become problems and to provide on-the-ground insights for improving the system.

**Do a post-campaign debrief** with all participating staff or provide a survey to understand what worked and pain points.

## Logistics

**Provide enough advance planning** so the implementation team has sufficient time and resources to deliver a project's success.

**Include a clear backup plan** in the planning for when there are unforeseen interruptions, particularly in getting educational materials delivered to residents and for capturing data on the designated day.



**Having a designated project manager** overseeing the whole project for the property group ensures there is centralized information and communication. This person served as a liaison to The Recycling Partnership, provided reminders to property managers when data hadn't been received as a deadline approached, and received report-outs when education was successfully delivered.

## Educational Materials

**Residents found tangible assets**, such as the info cards, tote bags, and door tags, were the most helpful educational assets deployed. The *Do You Recycle? Challenge* relied on this feedback to create the suite of materials as a core offering to challenge participants. As suggested in the Gables analysis, it would be helpful to conduct a more longitudinal analysis to see which asset individually influences behavior the most.

**Centralize design and printing** of educational material to reduce confusion and logistics delays. This approach was replicated in the *Do You Recycle? Challenge* and improved on by creating an online portal for designing bags and selecting a community program partner to centralize orders and manage delivery.

RESIDENTS FOUND TANGIBLE ASSETS, SUCH AS THE INFO CARDS, TOTE BAGS, AND DOOR TAGS, WERE THE MOST HELPFUL EDUCATIONAL ASSETS DEPLOYED.



# A Multifamily Challenge

## Testing an Innovative Approach to Influence Better Multifamily Recycling

The *Do You Recycle? Challenge* was crafted to scale the best management practices of the two multifamily pilot programs that were conducted at the beginning of 2021. The challenge set an ambitious goal to reach as many as 100 properties in 12 months. The development of the approach to scale looked to a model that had worked for the City of Atlanta in delivering engagement on energy and water efficiency for commercial buildings called the [Atlanta Better Buildings Challenge](#). While the City of Atlanta does have a multifamily ordinance, not all properties provide sufficient recycling service on property. With an array of stakeholders in the multifamily recycling system, the theory behind this challenge was to motivate properties and stakeholders to find innovative tactics to improve recycling access on property, with the end goal of identifying best management practices for successful multifamily recycling to scale improved access throughout the city. This model relies on collaboration with a selected group of local nonprofit organizations (and potentially government) to deliver resources to the community and required that properties already have recycling service on-site or available to them through its independent contracting process.

### Goals

The *Do You Recycle? Challenge's* (DYRC) intent is to scale the lessons from the pilot programs to reach multifamily properties across the City of Atlanta, both geographically and on the affordability spectrum. The DYRC is itself a pilot for a challenge model, providing multifamily communities the tools and guidance needed to deliver and track recycling access and education to all residents. The DYRC used competition and peer to peer relationship building as a motivator for properties to take the time and work toward improving recycling. Ultimately, properties could view the challenge aspect to compare themselves against their own progress, and through the end of year recognition event, the challenge also provided the ability for properties to have their progress compared against other participating properties to showcase outstanding performance. Program involvement challenges multifamily communities to commit to reduce waste to landfills, improve recycling outcomes, and empower residents to do their part.



## Stated goals of the *DYRC* include:

**Increase** participation at participating properties

**Reduce** contamination at participating properties

**Reach** up to 100 properties participating in the 12-month period

Focus first on large properties (100+ units) and properties with demonstrated need

The *DYRC* community program partner team started by reaching out to multifamily property managers across the city to invite them to participate. Promotional partners delivered messages to their networks to drive multifamily properties into the pipeline for onboarding.

## Program Offering

Educational Materials: Like the pilot programs, each participating property in the *DYRC* is asked to distribute an education campaign spanning a minimum of four weeks. On behalf of participating properties, the designated program partners can customize the accepted materials and add the property logo using a [design portal](#) created by The Recycling Partnership specifically for multifamily properties. The design is then replicated across all educational materials. The *DYRC* worked with a local printer to let the properties know about the scale of the project, create a streamlined ordering process (orders were sent in via a custom project order template), and establish a set-price menu for the project.

**LIKE THE PILOT PROGRAMS, EACH PARTICIPATING PROPERTY IN THE DYRC IS ASKED TO DISTRIBUTE AN EDUCATION CAMPAIGN SPANNING A MINIMUM OF FOUR WEEKS.**

## Educational Material Options



Signage



FAQ



Infocard



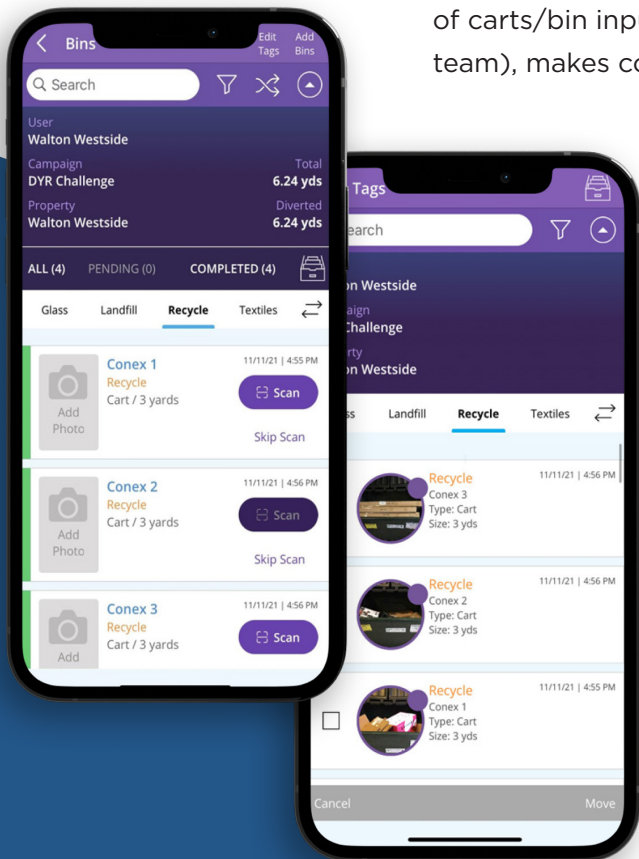
Tote Bag



**Data and Measurement:** From the pilot projects, it was suggested that a more tech-forward approach to data collection should be tested in the *DYRC*. The Recycling Partnership engaged technology company [Zabble Zero](#) to develop an application specifically for property managers to record volume and contamination information for the *DYRC*.

As part of the onboarding process, a community program partner (described further below) alongside the property manager created the property's profile in the app and provided on-site training. Access to the app and technical assistance from the Zabble Zero team were provided through the *DYRC*. The app records volume data and photo evidence of carts/bin input by the user (the property management team), makes conversions to weight, and provides space to

record contamination types. The data is then available to the property via a dashboard to see progress over time. This data was accessible by the program partners and the managing partners to enable support in data gathering and verification as well as to provide insight into the progress of the *DYRC*. Individual property data was not publicly available or accessible to other participating properties. *DYRC* properties were asked to gather pre-measurement data for two weeks prior to the education campaign, the four weeks during the campaign, and an additional two weeks after the education campaign (see Property Participation Schedule). Many properties continued to use the app to capture data beyond the eight-week minimum. Measurement is defined as recording the cart/bin fullness and capturing a photo of all recycling collection receptacles the date before or date of a scheduled haul to provide the most accurate total fullness reading.



**Infrastructure Improvements:** Understanding education can only work if the right infrastructure is in place, a mini-grant strategy was developed to provide funding to make recycling infrastructure improvements on each property in the lead-up to the education campaign. All properties were encouraged to apply through a [mini-grant form](#), which was reviewed upon submission to ensure it met eligibility requirements.

**Eligibility requirements:**

**Reimbursement model** (If reimbursement model is not feasible, consider a pre-paid model where funds are given to purchase materials, or purchase the material for the grantee.)  
—improvement must be made within six weeks of mini-grant approval.

**Up to \$2,500 per mini-grant** (first-come, first-served basis until mini-grant funds were exhausted).

**Priority given to multifamily properties** that demonstrate need.

**Grant funds** must be spent on introducing or improving infrastructure to the site.

→ No ongoing costs such as hauling service or cellular service is eligible for funds

**Eligible improvements** include the purchase of:

- Recycling carts or dumpsters
- Fencing around the recycling area
- Permanent wayfinding or educational recycling signage
- Security or measurement technology for the recycling area
- Device for measurement (phone or tablet)<sup>6</sup>



<sup>6</sup> Zabble Zero's application is only available at this point on iOS devices.

# The Power of Partnership

## Working with Local Stakeholders Is Critical to Success

This program worked to not only catalyze recycling on multifamily properties but build a strong recycling community with impactful local stakeholders.

### Managing Program Partner

[Live Thrive](#) (an Atlanta-based nonprofit organization) serves as the community hub for the *DYRC*. Live Thrive's mission is to empower people, organizations, communities, and businesses to make positive, healthy, and sustainable changes to the environment. The Center for Hard to Recycle Materials (CHaRM) facility is a premier program of Live Thrive. It is a permanent drop-off facility that aims to improve our environmental health by encouraging reuse and diverting thousands of pounds of household hazardous waste and other hard-to-recycle items from Metro Atlanta landfills and water systems. CHaRM also accepts sorted single-stream items for those who do not have access. All operating expenses for CHaRM are paid from grants, donations, and recycling fees. As the managing program partner, Live Thrive hosts the staff support to implement the *DYRC*.

The role of the Managing Program Partner is to be the centralized face and organizing body to the *DYRC*, keeping all parties on track, ensuring all deliverables are met, and organizing the tactical implementation of the program. Live Thrive employs two key staff members with grant funds to run and manage the *DYRC*.

### Challenge Program Manager

This full-time project manager housed at CHaRM (Live Thrive) manages and tracks operational efforts of *DYRC* including:

**Maintaining** accountability with partners to meet monthly goals

**Reviewing** and quality controlling the data input and serving as the interface with the technology provider

**Accepting** and coordinating review of infrastructure applications with the leadership team

**Coordinating** weekly meetings with the leadership team

**Maintaining** and verifying data and metrics

**Organizing** all materials for the project in fileshare

**Providing** support for community program partners in program delivery

**Producing** reports for The Recycling Partnership and partners

**Planning** educational events and an annual recognition event

## Challenge Program Coordinator

**Provides ongoing support** of external (to Live Thrive) community program partners as they recruit, train, educate, and collect the data of their portfolio of multifamily properties participating in the pilot program

**Supports the training** of community partners who, in turn, will train property teams in on-site infrastructure audit, use, and collection of data and corresponding app, campaign creation, and delivery (“train-the-trainer approach”)

**Recruits and onboards multifamily properties** to participate in the pilot program as a community program partner

**Supports the planning** of educational events and an annual recognition event

“The *Do You Recycle? Challenge* is in alignment with Live Thrive’s mission to provide comprehensive education about the importance of sustainable materials management. As part of this education process, we encourage people to reuse, recycle, or reengineer to divert harmful materials from Atlanta’s landfills and waterways. This challenge program is an effort intentionally grounded in the collaborative knowledge of local organizations so that the technical and financial resources provided by The Recycling Partnership can be most sustainably utilized in Atlanta for Atlanta residents. This ‘ground-up meets top-down’ model is one that can be replicated to serve any community.” — Peggy Whitlow Ratcliffe, Founder & Executive Director, Live Thrive Inc.

**AS PART OF THIS EDUCATION PROCESS, WE ENCOURAGE PEOPLE TO REUSE, RECYCLE, OR RE-ENGINEER TO DIVERT HARMFUL MATERIALS FROM ATLANTA’S LANDFILLS AND WATERWAYS.**

## Community Program Partners

Organizations that are committed to engaging, recruiting, and providing education directly to multifamily properties through the *DYRC*. These organizations are embedded in the communities they serve and will function as the relationship managers, trainers, and technical support to the multifamily properties through the *DYRC*. Program Partners include [Atlanta Housing](#) and [Livable Buckhead Inc.](#)

“The *Do You Recycle? Challenge* presented an opportunity for us to engage Buckhead residents and property managers, and once again be part of a citywide effort to deliver sustainable solutions that can also save money and improve, in this case, the attractiveness of multifamily communities that participate. Recycling is an easy way for Atlanta residents to take sustainability into their own hands while contributing to the economic success of the state more broadly.” — Denise Starling, Executive Director, Livable Buckhead Inc.



## Promotional Partners

Organizations that are committed to promoting the *DYRC* to their networks to drive multifamily properties to the landing page where they can find out more and sign up. These partners were provided about four to five months of social media content to share with their audiences on each of their platforms during the program. Almost every week for the months of November 2021 through early March 2022, partners were sent an email with a graphic and caption to share that week. They also had the option to repost/share from Live Thrive's social media pages directly. This method ensured consistency across all program messaging during the busiest outreach time. Monthly meetings with promotional partners occurred to connect on potential interest and brainstorm best outreach practices.



**City of Atlanta  
Office of Resilience**



**Atlanta Apartment  
Association**



**Georgia Recycling  
Coalition**



**Atlanta  
Recycles**

## December Example



**Caption:** Now that we've covered all of the aspects of the free, personalized educational material and campaigns that are included in the *Do You Recycle? Challenge*, it's time to hear from the community program partners about their experience with the program so far. We will highlight one program partner each week for the rest of December through blog posts on our website. Atlanta Housing, Livable Buckhead, and Live Thrive will share specific updates, property reactions, and how the program will impact their future work. More to come next week!  
*#doyourecycle #dyrchallenge*

## January Example



**Caption:** Looking to make a positive impact in your community this year? Do you live in an apartment, condo, or townhome in the City of Atlanta? Could the current recycling process in your building be improved? Learn how the *#DoYouRecycle? Challenge* would help to improve your property's recycling infrastructure and education. Visit this link to learn more: <https://livethrive.org/do-you-recycle-challenge/> *#recycling #recyclingchallenge #dyrchallenge*

# Participating Property Experience

Property agrees via a formal voluntary agreement (attached in Tools) to:

**Conduct** a walk-through of the property and set up a property profile in the Zabble Zero app with the Community Program Partner.

**Commit** to collecting recycling data using the Zabble Zero app in the initial campaign phase and ongoing data reporting through at least the end of the program (12 months total).

**Commit** to providing residents with *DYRC* educational marketing materials (at no cost of materials).

**Consider** all feasible recommended infrastructure improvements to the property.

## Key Considerations:

**The voluntary agreement** is nonbinding but lays out the roles and responsibilities of each party.

**The agreement includes** language for data use from the Zabble Zero app.

**It may take longer** than one week for the Community Program Partner to get the agreement signed by the property manager.

**The Community Program Partner** sends the signed document to the program manager (foundational partner) so a log can be kept.

## Property Benefits:

**Personalized campaign** that includes access to free signage, educational materials (info cards, door tags, tote bags, and more), and marketing of sustainability services.

**Improved recycling quality.**

**Contamination reduction.**

**Public recognition event.**

**Eligibility to implement and/or improve** recycling infrastructure with additional grant funding.

**Opportunity to comply** with the City of Atlanta's multifamily ordinance.

“We are excited to be a part of an initiative that gives multifamily communities in the City of Atlanta the same access to recycling as their single-family neighbors. The *Do You Recycle? Challenge* not only increased recycling access and education for select properties in the Atlanta Housing portfolio but also provided us valuable tools and training to help us track and measure our recycling progress and expand the program so that we can continuously improve our recycling outcomes.” — Priya Vellaithambi Environmental and Sustainability Manager, Atlanta Housing

**THE *DO YOU RECYCLE?* CHALLENGE NOT ONLY INCREASED RECYCLING ACCESS AND EDUCATION BUT ALSO PROVIDED US VALUABLE TOOLS AND TRAINING TO HELP US TRACK AND MEASURE OUR RECYCLING PROGRESS.**

<b>Property Onboarding Process and Participation Schedule</b>	
<b>Pre 8-week Campaign</b>	
*Please note: the three steps before the 8-week campaign can vary greatly time-wise. Properties may take anywhere from 4-6 weeks to get to the campaign portion of the program.	
Step 1 - Program Start	Voluntary Agreement signed; Mini grant opportunity discussed; Information about Zabble Zero waste management app provided
Step 2 - Property walkthrough	Property walkthrough assessment and Zabble profile set-up (infrastructure logging, and visual container tag training for data collection) <ul style="list-style-type: none"> <li>The entry/tag of each recycling container should happen the day before the hauler pickup</li> </ul>
Step 3: Campaign Development	Apply for mini grant, if applicable, and 8-week campaign developed by program partner to be approved by property staff
<b>8-week Campaign</b>	
2 weeks - Pre-implementation Phase	<ul style="list-style-type: none"> <li>Pre-implementation data collection (2 consistent weeks of tagging bins before every hauler pickup)</li> <li>Assessing recycling data before implementation of educational material</li> </ul>
4 weeks - Implementation Phase	<ul style="list-style-type: none"> <li>Implementation data collection (4 consistent weeks of tagging bins before every hauler pickup)</li> <li>Implementation of educational material (signage, tote bags, information cards, door tags, and digital material) staggered over the 4 week period</li> <li>Assessing recycling data during implementation of additional/improved infrastructure</li> </ul>
2 weeks - Post-implementation Phase	<ul style="list-style-type: none"> <li>Post-implementation data collection (2 consistent weeks of tagging bins before every hauler pickup)</li> <li>Assessing recycling data directly after infrastructure implementation</li> </ul>
≥2 weeks - Ongoing Phase	<ul style="list-style-type: none"> <li>On-going data collection (at least 2 weeks, but will vary)</li> <li>Assessing recycling data post 8-week campaign</li> </ul>

### Cost Breakdown

The average number of units for a participating property was 189 units and the average total cost for educational materials including new signage for the property and tote bags, info cards, and door tags for all units (plus delivery fee) was \$1,312.00. This total divided by the average number of units shows an average price per unit to be \$6.93.<sup>7</sup> The lowest unit count for a participating property was 38 which incurred a per unit cost of \$21.91 and the highest unit count for a participating property was 406 which incurred a per unit cost of \$4.72.

<sup>7</sup> This average does not include two of the participating properties that had outlier costs which were not indicative of typical campaigns.

## Outcomes

The *Do You Recycle? Challenge* produced a breadth of outcomes that have and will continue to improve the recycling system for multifamily properties. In addition to bringing a dynamic group of community organizations together to design and develop a first-of-its kind recycling challenge in the City of Atlanta, the challenge results include:

**Education provided** to 27 participating properties representing nearly 5,000 individual residential units

**Total number of mini-grants awarded:** 18

**11 participating properties** are affordable properties<sup>8</sup>

**Delivered more** than 20,000 individual pieces of education, including tote bags, info cards, signage, and door tags

**The most common types** of contamination recorded include plastic bags, Styrofoam, and plastic wrap

**An end-of-year recognition event** for participating and prospective properties that included presentation of the following awards:

- **Largest Percentage Increase in Recycling Participation Award**<sup>9</sup> presented to awardee for increasing the average recycling pounds per unit from 1.2 pounds to 2.8 pounds.
- **Largest Percentage Decrease in Recycling Contamination Award**<sup>10</sup> presented to awardee for decreasing contamination by 40%.
- **Most Total Tonnage in Recycling Award**<sup>11</sup> presented to awardee for averaging approximately 5.9 recycling pounds per unit per week.

**Insight into average weekly pounds per unit** by phase of properties that have complete weeks of data (see description and charts on page 31).

**Critical stakeholder engagement** that brought seven local organizations and many more participants together to focus on recycling and to help design a roadmap to continue stronger engagement throughout the city.

<sup>8</sup> Atlanta housing defines affordable via its program eligibility requirements here: | [atlantahousing.org](http://atlantahousing.org)

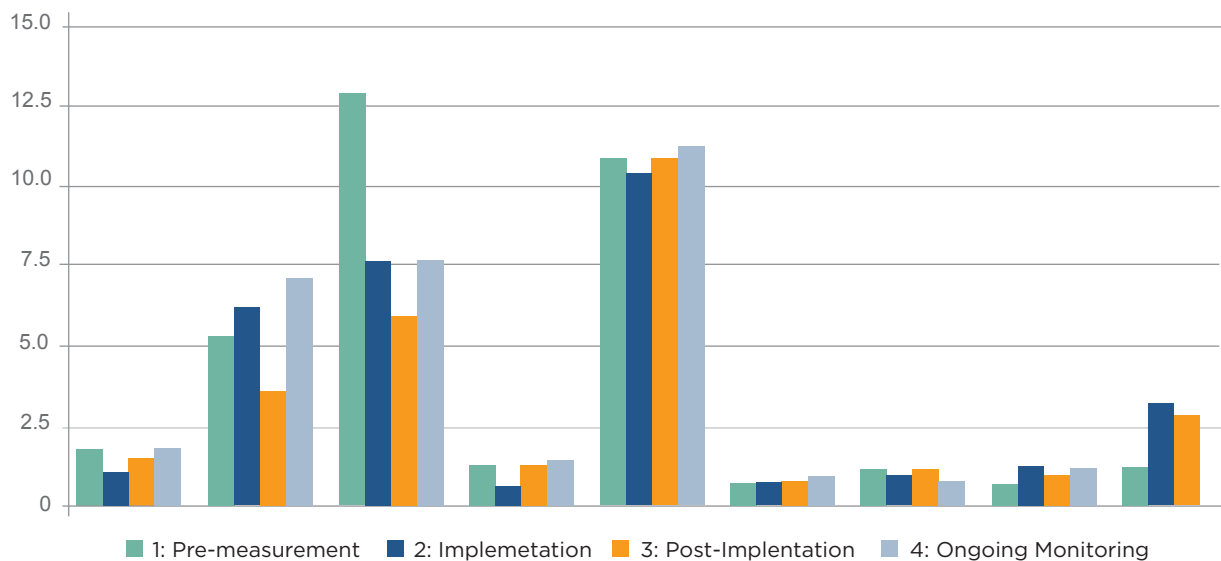
<sup>9</sup> Candidates for this award must have at least eight complete weeks of data (including two weeks pre, four weeks implementation, and two weeks post). Of the total pool of properties that have met that threshold, the winner of the award is the property that has the largest increase in average recycling pounds per unit from phase 1 (pre-measurement) to phase 3 (post-implementation).

<sup>10</sup> Candidates for this award must have at least eight complete weeks of data (including two weeks pre, four weeks implementation, and two weeks post). Of the total pool of properties that have met that threshold, the winner of the award is the property that has the largest percentage decrease in recycling contamination from phase 1 (pre-measurement) to phase 3 (post-implementation).

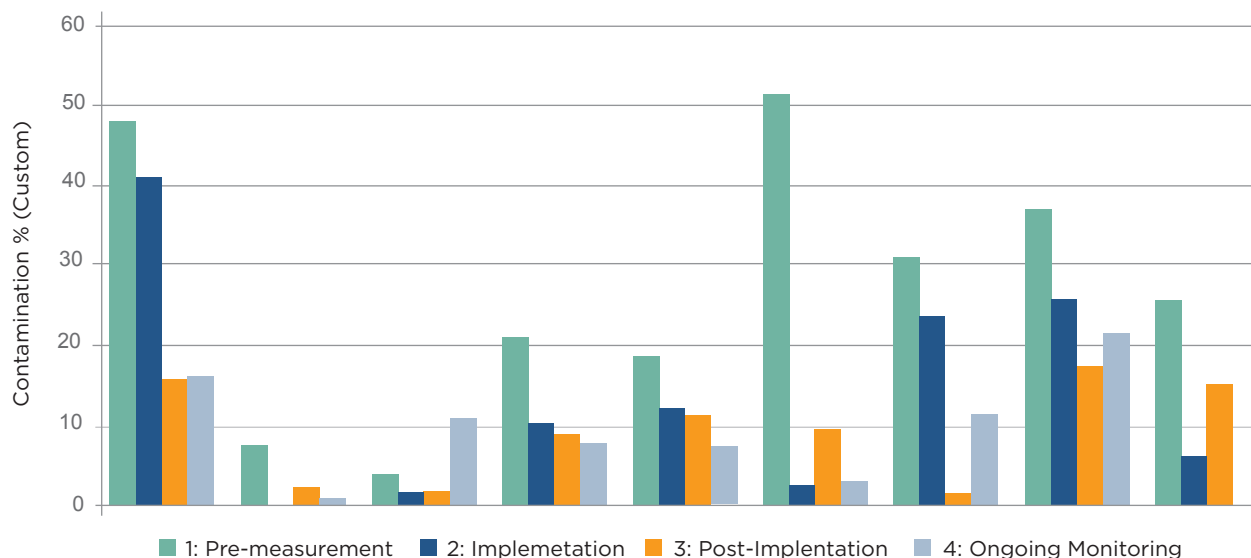
<sup>11</sup> Candidates for this award must have at least eight complete weeks of data (including two weeks pre, four weeks implementation, and two weeks post). Of the total pool of properties that have met that threshold, the winner is the property that has the highest average recycling pounds per unit in phase 3 (post-implementation).

The tables below show the average weekly pounds per unit by phase and contamination percentage by phase. While there are 27 total participating properties, based on when the properties were onboarded to the program, they may not have collected eight full weeks of data through their campaigns. The set of nine below represents the properties that collected eight complete weeks of data. A full or complete week of data collection refers to weeks in which there was a volume measurement taken of the recycling before every hauler pickup (i.e., if a property gets a pickup two times a week, two tags for that week to be considered complete). Each group of four bars represents one property.

Average Weekly Pounds/Unit by Phase (All Time)



Contamination % by Phase





# Takeaways

## Challenges

**The COVID-19 pandemic** interrupted timing and delivery of educational materials and data collection in multiple instances.

**The program experienced** supply chain issues in ordering and delivering consistent tote bags at the scale needed in the first six months. Allow for plenty of time when ordering bins and totes. Be aware of supply chain issues and delays.

**Property managers** juggle competing priorities, so it can be difficult to obtain consistent recycling data collection when it is reliant on human input.

**Consistent and efficient** volume-based measurement can be difficult to maintain among properties. A weight-based measurement system could provide value for this program.

## Opportunities

**People want** to recycle in multifamily properties.

**Many more properties** are eager to expand and improve when dedicated resources for outreach is available.

**Glass and cardboard** are two materials that are currently underserved for collection in multifamily properties and could be focused on to drive more recycling tonnage.

**Properties can take advantage** of The Recycling Partnership's portal for DIY campaign materials to access marketing and educational materials at no cost.

**There is opportunity** to continue to test approaches for better on-site measurements.

**Further analysis** could provide insight on potential utility of a hybrid model in which a challenge supports an enforced multifamily recycling mandate.



# Kick-Start Your Efforts to Reduce Waste in Multifamily Properties

The *Do You Recycle? Challenge* will continue under the management of Live Thrive through the end of 2022, as it tests new approaches to providing increased access and education to multifamily households. The second iteration of the challenge will be more centralized in its management approach and focus on engaging property groups through a train-the-trainer model, while continuing to print and deliver educational materials at no cost to participants.



## Communications and Engagement

[How to Launch a Challenge](#), [Create customizable educational materials](#), [tutorial video on using templates](#)



## Volume Tracking

[Seven steps to measure volume](#), [reference guide for measuring volume](#), [manual volume measurement tracking sheet](#), [EPA volume to weight conversion factors sheet](#)



## Feedback

[Sample resident survey](#)



## Implementing *Do You Recycle? Challenge*

[Sample voluntary agreement](#), [sample promotional content](#), [sample mini-grant application](#), [sample property participation schedule](#)



# Appendix

## Implementation Details (see page 13)

AMLI's campaign consisted of nine properties and represented 2,973 individual residential units. The campaign opted out of introducing new separated glass recycling as part of the pilot due to space and time constraints.

Community	Number of Bins to Measure
AMLI Property 1	Measure all four recycling bins before each pick-up
AMLI Property 2	Measure all three recycling bins by loading dock before each pickup (recycling compactor to be measured by waste hauler)
AMLI Property 3	No measurements needed (recycling compactor to be measured by waste hauler)
AMLI Property 4	Measure all three recycling bins before each pick-up
AMLI Property 5	Measure all eight recycling bins before each pick-up
AMLI Property 6	Measure all twelve recycling bins before each pick-up
AMLI Property 7	Measure all sixteen recycling bins before each pick-up
AMLI Property 8	No measurements needed (recycling compactor to be measured by waste hauler)
AMLI Property 9	Measure all seventeen recycling bins before each pick-up

The following table describes the cost of the educational materials for each participating property:

	Unit Count	Bags	Signage	Door Tags	Info Cards	Delivery Charge	Total
Property 1	56	0	\$390.00	\$0.00	\$55.00	\$0.00	\$445.00
Property 2	254	\$864.00	\$300.00	\$219.00	\$117.00	\$45.00	\$1,545.00
Property 3	282	\$1,154.71	\$300.00	\$219.00	\$117.00	\$45.00	\$1,835.71
Property 4	162	\$425.00	\$300.00	\$135.00	\$140.00	\$45.00	\$1,045.00
Property 5	149	\$1,570.42	\$300.00	\$150.00	\$85.00	\$35.00	\$2,140.42
Property 6	81	\$410.82	\$300.00	\$115.00	\$55.00	\$25.00	\$905.82
Property 7	240	\$620.00	\$360.00	\$225.00	\$305.00	\$55.00	\$1,565.00
Property 8	32	\$821.72	\$300.00	\$115.00	\$55.00	\$25.00	\$1,316.72
Property 9	61	\$410.82	\$300.00	\$115.00	\$55.00	\$25.00	\$905.82
Property 10	400	\$1,030.00	\$300.00	\$375.00	\$85.00	\$125.00	\$1,915.00
Property 11	90	\$230.00	\$300.00	\$115.00	\$55.00	\$35.00	\$735.00
Property 12	48	\$337.59	\$300.00	\$115.00	\$55.00	\$25.00	\$832.59
Property 13	38	337.59	\$300.00	\$115.00	\$55.00	\$25.00	\$832.59
Property 14	200	\$620.00	\$750.00	\$225.00	\$95.00	\$55.00	\$1,745.00
Property 15	319	\$1,424.25	\$300.00	\$284.00	\$140.00	\$65.00	\$2,213.25
Property 16	305	\$1,424.25	\$300.00	\$284.00	\$140.00	\$65.00	\$2,213.25
Property 17	70	\$230.00	\$300.00	\$115.00	\$55.00	\$35.00	\$735.00
Property 18	130	\$425.00	\$300.00	\$135.00	\$85.00	\$45.00	\$990.00
Property 19	150	\$425.00	\$300.00	\$135.00	\$85.00	\$45.00	\$990.00
Property 20	222	\$620.00	\$300.00	\$115.00	\$95.00	\$55.00	\$1,185.00
Property 21	130	\$425.00	\$300.00	\$135.00	\$85.00	\$45.00	\$990.00
Property 22	197	\$425.00	\$360.00	\$135.00	\$85.00	\$45.00	\$1,050.00
Property 23	209	\$620.00	\$300.00	\$225.00	\$95.00	\$55.00	\$1,295.00
Property 24	206	\$620.00	\$150.00	\$225.00	\$95.00	\$55.00	\$1,145.00
Property 25	140	\$425.00	\$210.00	\$135.00	\$85.00	\$45.00	\$900.00
Property 26	244	\$620.00	\$180.00	\$225.00	\$95.00	\$55.00	\$1,175.00
Property 27	406	\$1,030.00	\$300.00	\$375.00	\$85.00	\$125.00	\$1,915.00

# Let's Stay Connected.

For more information and resources,  
visit us at [recyclingpartnership.org](https://recyclingpartnership.org).

