

Montgomery County, Maryland • Department of Environmental Protection
Division of Solid Waste Services • Waste Reduction and Recycling Section

Food Scrap Recycling at Multi-Family Properties



Case Studies





Food Scrap Recycling at Multi-Family Properties

Case Study: The Blairs



Background

The Blairs is a 27-acre mixed-use property including 1,400 apartments in four high-rise buildings and townhome style living options (Blair East, Blair Plaza, Blair House, Blair Towns, and The Pearl) located in downtown Silver Spring, Maryland. In 2012, the

community was America's first multi-family residential campus to receive LEED Gold Certification for Operations and Maintenance. The Blairs offers residents a smarter and greener way of living including car-free options,

apartments with Energy Star® appliances and lighting, 100 percent wind power-supplied electricity, and food scrap recycling.

The Tower Companies is a developer, owner, and manager of over 5 million square feet of commercial,

multifamily, and retail properties in the Washington, D.C. Metro area, which includes The Blairs. What makes The Tower Companies unique is its interest in the life cycle of its buildings from development, to construction, and through operations.



Jonathan Bauer, sustainability analyst at The Tower Companies, said their decision to start a food scrap recycling program at The Blairs came from top management. In 2012, The Tower Companies launched a small pilot program for food scrap recycling in Blair East and Blair Plaza. Based on this success, the program was expanded and rolled out to the entire Blairs residential community in 2013. The same program was implemented at The Pearl when it opened in 2017.



Process

After researching and getting competitive bids from several food scrap collection service providers, The Blairs chose to contract with Compost Crew. Compost Crew is a Montgomery County licensed collector that has worked with The Blairs from its initial pilot program in 2012 to the current food scrap recycling integration throughout the entire Blairs community.

Each floor of The Pearl has a trash room where residents can recycle food scraps, mixed paper, and commingled materials in clearly labeled containers.



The Pearl has central food scrap, mixed paper, and commingled material collection containers



Larger central food scrap recycling collection containers in the loading dock

The Blairs property management and cleaning team work together to monitor the food scrap recycling program. The cleaning team is responsible for collecting food scraps every day and bringing them to larger central collection containers in the loading dock. These containers are collected by the Compost Crew, transported to a local composting facility, and processed into a beneficial soil amendment.



As part of The Blairs' sustainability initiative, The Pearl building has an urban farm on-site. Materials from the farm are composted and reused on-site.

Education

Tower's sustainability team organizes trainings for existing and new staff to educate them about the food scrap recycling program. These educational trainings typically include the compost hauler, cleaning crew, and representatives from Montgomery County. Tower also conducts broader sustainability trainings for all staff once or twice a year. This prepares staff, especially leasing agents and property management, for any questions residents may have on the food scrap recycling program.

When new residents move in, The Blairs provides them with a two-gallon food scrap recycling collection container, compostable liners for the container, and guidelines on which materials they can and cannot recycle. In addition to emails and posters placed throughout each property, The Blairs gets residents involved in the food scrap recycling program by organizing special events on Earth Day and America Recycles Day.

From presentations with staff from the Montgomery County Department of Environmental Protection, Division of Solid Waste Services to photo competitions and happy hours, The Blairs takes these opportunities to further educate residents on the food scrap recycling program and its progress.

In-unit food scrap and recycling containers



Results

Even though residents are not required to participate in their food scrap recycling program at The Pearl, it is estimated that up to 80 percent of the residents participate in the program. In 2017, The Blairs (not including The Pearl) recycled 11,610 pounds of food scraps. In its first full year of food scrap recycling, The Pearl is on track to recycle over 6,000 pounds of food scraps, which will account for almost 40 percent of food scrap recycling at the entire Blairs community. Over the past 5 years, The Blairs has diverted over 60,000 pounds of compostable items.

Benefits

A major benefit of The Blairs food scrap recycling program is the observed reduction in trash generation by residents. The increased amount of recycling brings The Tower Companies and The Blairs closer to their shared goal with the County to reduce waste and recycle 70 percent of its waste generated by 2020.

Opportunities & Lessons Learned

With constant turnover in residents, common in multi-family communities, and daily distractions and challenges with which residents contend, The Blairs found the educational component of its food scrap recycling program to be a challenge. In addition to its standard methods of education, The Blairs redesigned signage in trash rooms to clearly distinguish which materials can and cannot be recycled. It also sends quarterly reminders to staff and residents emphasizing participation in the food scrap recycling program as well as updates.

Space is another major limitation for The Blairs' food scrap recycling program. With newer buildings such as The Pearl, the appropriate amount of space for food scrap recycling collection containers in trash rooms and in the loading dock were anticipated and incorporated into the building design. In older buildings, however, The Blairs found it difficult to add another container in an already crowded trash room.

On this front, The Blairs scheduled daily trips to the loading dock to minimize overflowing waste and recycling containers in trash rooms.



Examples of recycling and trash containers in trash rooms at The Pearl

Next Steps

With hundreds of residents in each of The Blairs apartment buildings and an increasing number of leases, The Blairs produces a lot of food scraps. The Pearl, for example, initially plans to add four to five, 35-gallon food scrap collection containers to their loading dock to meet resident's needs.

The next steps for The Blairs are to continue staff and resident education to improve the program, update signage and bins as necessary, continue engagement with the cleaning team, and schedule waste audits to measure progress and find additional areas for improvement.

Recommendations

For multi-family properties considering a food scrap recycling program, The Blairs suggests starting small – whether that is in a small apartment building or a single office. Your office is a particularly smart starting point as it allows you and your office staff to become familiar with materials that can be recycled and the process involved. Then, when you introduce the program to your residents, staff is more familiar with your program and can answer their questions.

Recycling containers in the leasing office of The Pearl



For more information visit
www.montgomerycountymd.gov/recycling or call 3-1-1 or 240-777-0311



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Food Scrap Recycling at Multi-Family Properties

Case Study: Friends House Retirement Community



Background

The Friends House Retirement Community is 62 rolling acres of retirement living located in Sandy Spring, Maryland. Established in 1967, Friends House provides affordable homes for low to moderate income seniors.

In 1967, Friends House consisted of 100 apartments, four wings with 25 apartments and an additional wing for administrative offices and shared common areas. Since then, the property has expanded to include 31 freestanding cottages and assisted living and skilled nursing care units.

Operating under the Quaker Religious Society of Friends, Friends House is guided by the values of simplicity, peace and nonviolence, integrity, community, equality, and stewardship and sustainability. These values are reflected in Friends House commitment to environmental consciousness. In the mid-1980s, residents who were avid farmers decided to set up a sizable kitchen garden. During this time, they built four sturdy compost bins, and started collecting and composting food scraps, and this process continues today.



Process

At Friends House, food scrap recycling collection containers are placed in the kitchen for staff use and in each apartment wing for resident use. A designated resident of Friends House, Lucille Ridlon, manages the food scraps recycling program which entails recruiting volunteers and organizing a collection schedule.

Resident volunteers are responsible for collecting the food scraps and transporting them to the proper compost bin in the on-site garden. Volunteers chop up larger bits of food as necessary, cover the food scraps with several inches of leaves, wash the food scrap collection containers, and return the containers to the designated areas.

The maintenance director, Bob Hill, turns over and mixes the piles within each compost bin and transfers compost when necessary. When food scraps and leaves in Bin #1 begin to break down, Mr. Hill transfers the material to Bin #3 for active composting. Depending on the food scraps themselves and the temperature of the compost pile, the materials in Bin #3 might need to be turned several times before the compost product is ready for use. Bin #2 is used to store leaves, which are used to cover the food scraps in Bin #1.



Food Scrap Recycling Program/Composting Involvement: (left to right) Assistant Director for Culinary Services - Davena Marques, Former Resident and Clerk of the Gardening Committee - Beth Morrison, Resident and Compost Manager - Lucille Ridlon, and Maintenance Director - Bob Hill

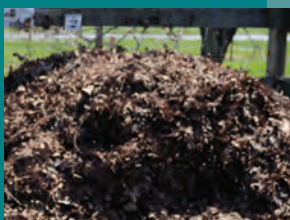
Beth Morrison, a former resident and Clerk of the Garden Committee, which oversees the food scraps recycling program. In addition to volunteering time to transport the food scraps from the kitchen and apartment wings to the compost pile, the clerk communicates with the kitchen and maintenance staff to ensure they are trained and educated on both the food scrap recycling collection and composting processes.

Four compost bins are made to accommodate the varying stages of the composting process at Friends House.



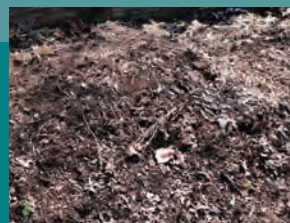
Bin #1: Start Compost

Food scraps are added to a compost bin and covered with leaves.



Bin #2: Leaves

Storage for leaves used to cover food scraps in Bin #1.



Bin #3: Active Compost

Do not disturb unless specified to 'turn over' or mix.



Bin #4: Finished Compost

Ready for use. Community produce plots have priority.

Education

Friends House uses the Home and Garden Information Center website for providing further educational materials on its composting program. Additional staff education is provided by resident and current compost manager, Ms. Ridlon. Ms. Ridlon also completed Master Gardener training with a specialty in composting. Friends House welcomes other local Master Gardeners to visit the property to teach the science and art of composting and gardening.

Acceptable and unacceptable materials for recycling



When new residents move in, Friends House provides them with information on their food scrap recycling collection program, including what can and cannot be composted on the property. Informational flyers also are posted throughout the property displaying this information.

New residents also learn how to get

involved with gardening on-site, join the gardening committee, and volunteer in the program.

Results

Friends House has consistently recycled nearly 30,000 pounds of food scraps per year since 2014. When the food scraps and leaves are fully composted, residents and staff are welcome to use it as they desire. Though community produce plots have priority (consisting of 12 raised beds), residents still find there is enough to use in their personal gardens and raised beds around their cottages.

Benefits

While Friends House saves money on their waste disposal collection costs by keeping food scraps out of their waste stream, there are other benefits as well. Composting at Friends House improves community relationships, allows residents to be outside and active, and provides an opportunity for continuous learning.



Friends House community garden

In addition, by composting Friends House is creating a soil amendment that can be used in community and personal gardens. Use of these recycled food scraps as compost improves soil health and structure; reduces runoff from rain and melting snow; increases drought resistance; and reduces the need for added water and commercial fertilizers.

Opportunities & Lessons Learned

Education was a major challenge with the collection of food scraps at Friends House. Residents often forget which types of materials can and cannot be recycled. This was successfully addressed through constant communication with staff and residents, regular updates to flyers displaying acceptable food scraps and other acceptable organic materials, and monitoring and inspection of collected food scraps.

The composting process itself can be physically demanding. At Friends House, a limited number of residents are physically capable of transporting food scraps to the compost bins, resulting in a limited number of volunteers. Developing a schedule helps with maintaining the appropriate number of volunteers as the population changes.

Next Steps

In 2017, Friends House started a redevelopment project to accommodate the growing senior population. The expansion not only created additional housing options, such as new cottages and apartments, but it also included environmentally sustainable initiatives for the existing community, grounds, and new buildings. These initiatives include efficient storm water management; biodiversity and natural features; and sustainable operations and maintenance, among others.



New lodge apartments and environmentally sustainable initiatives included in the redevelopment project will increase the amount of food scraps generated



The redevelopment project will increase the number of residents and the amount of food scraps generated for the food scrap recycling program. The four original compost bins created in the 1980s can easily accommodate additional amounts of food scraps. With more residents, a larger pool of volunteers can likely participate in the food scrap recycling collection and composting program.

Recommendations

For multi-family properties considering a food scrap recycling program, or specifically, a composting program, Friends House suggests finding in-house gardeners! Whether they are staff or residents, gardeners will likely appreciate the process. They may even have experience and knowledge which could help in the development of your program. If experience and knowledge is lacking at your property, Friends House encourages reaching out to local Master Gardeners. A Master Gardener can visit the property and teach residents and staff the science and art of gardening, including anything from composting basics to composting tips and tricks. This will jump-start your food scrap recycling program.

**For more information visit
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Food Scrap Recycling at Multi-Family Properties

Case Study: Riderwood Village



Background

Riderwood Village is 120 acres of private retirement living located in Silver Spring, Maryland. Starting as a single building and clubhouse in 2000, Riderwood Village is now the largest continuing care retirement community in America.



With four clubhouses, more than 1,840 independent living apartment homes, and a continuing care health services neighborhood, Riderwood Village is part of Erickson Living (a national network of continuing retirement communities).

The campus includes six restaurants, a café, and a pub for residents. In 2008, as a recommendation by their executive chef, Riderwood Village initiated a food scrap recycling pilot program in two of their six kitchens. Contracting food scrap recycling collection service with Bates Trucking & Trash Removal, Riderwood Village has now successfully rolled out the program throughout its entire campus.



Food Scrap Recycling Program Participation: Riderwood Village Housekeeping Manager and Sustainability Committee Member - Noel Vasquez (left), Assistant Dining Director - Scott Monfils (right), and Recycling Coordinator and Marketing Director at Bates Trucking & Trash Removal - Tara Lewis-Reid (center)

Process

Riderwood Village's food scrap recycling program is a pre-consumer operation that collects food preparation scraps (i.e. cuttings, peelings, leftovers) from its kitchens. Food scrap recycling collection containers are placed in each of their kitchens and during meal preparation, staff discard the food scraps in these designated containers.

Food scrap collection containers are placed throughout all Riderwood Village kitchens for staff use



Members of the Sustainability Committee, comprised of 10-12 Riderwood Village employees dedicated to educating staff on the food scrap recycling program, monitor the food scrap recycling containers to ensure materials are acceptable by Bates Trucking.



Poster in loading dock indicates which materials can be recycled

After meals, maintenance staff brings full 32-gallon food scrap recycling collection containers to the loading dock for pick up. Once or twice a week, Bates Trucking collects and transports the food scraps from the loading dock to their designated food scraps recycling processing facility.

At the processing facility, it takes less than 90 days to process food scraps, grass clippings, and leaves into a beneficial soil amendment. Riderwood Village receives a truck load of the finished product each year on Earth Day for use in their community gardens.

Education

With more than 1,500 employees, educating Riderwood Village staff on food scrap collection is essential to the success of the program. As part of their contract with Riderwood Village, Bates Trucking conducted an extensive training for all Riderwood Village staff. This training included flashcards, memory games, and reference materials on food scrap recycling and why it is important. Riderwood Village also conducts in-service sessions for staff several times a month which, among other topics, covers the food scrap recycling program.

Results

Riderwood Village has recycled more than 3 million pounds of food scraps since 2014 with 1,126,899 pounds of those food scraps recycled in 2017 alone. They also donate excess food to Elizabeth House, a residential shelter program committed to the health and welfare of pregnant women and their children. Riderwood Village has donated 31,880 pounds of excess consumable food to Elizabeth House since 2014.

Benefits

One clear benefit of recycling food scraps for Riderwood Village is a change in the overall recycling rate. Tara Lewis-Reid from Bates Trucking states that at least 70 percent of kitchen waste at Riderwood Village is recycled and composted. This has allowed Riderwood Village to reduce the number of waste containers in the loading docks and has substantially reduced total waste and associated waste disposal costs.

Opportunities & Lessons Learned

Staff education is a critical element in the success of the food scrap recycling program at Riderwood Village. With a large number of dedicated employees, educating new and existing staff is an ongoing effort. Frequent modifications to the list of materials that Bates Trucking accepts and does not accept (due to changes in the processor's list of acceptable materials) adds to the educational challenge.

Acceptable and unacceptable materials



To mitigate this, Riderwood Village organized the Sustainability Committee, which routinely distributes updated information to other staff members and the Recycling Committee. This approach has proven very successful, as Bates Trucking has not recorded any issues of contamination from Riderwood Village since their contract began in January 2011.

Space limitations are another concern for Riderwood Village. Putting additional containers for recycling food scraps in kitchens crowded with cooks and waitstaff was a major issue. Riderwood Village designated certain areas in the kitchen, out of the way of staff traffic, for the food scrap recycling collection containers.

Riderwood Village also had to make room for the food scrap recycling collection containers in the loading dock area. This was done by replacing several smaller capacity recycling and waste containers with larger 450 lb capacity trash carts. The Riderwood trash rooms have trash carts for commingled materials, mixed paper, scrap metals, and refuse. The rest of the space consists of up to twelve 32-gallon food scrap recycling collection containers at any given time.

Food scrap recycling collection containers are placed in the loading dock for pickup by Bates Trucking



One of many kitchens on the Riderwood Village campus recycling food scraps

Next Steps

As the largest continuing care retirement community in America, Riderwood Village will continue its repositioning of existing buildings to meet the high demands for retirement living in the Baltimore/Washington metro area. The property already expanded its facilities to include a 'Town Center' which includes a new lobby area, office spaces for the Sales team, and The Bistro – a restaurant with a display kitchen concept providing residents and guests with the opportunity to engage with the culinary team preparing their meals.

With their food scrap recycling program fully integrated throughout the property, the Bistro has sufficient food scrap recycling collection containers in place for kitchen staff. The next step for Riderwood Village, after each expansion, is to increase both food scrap recycling collection container capacity and the number of scheduled pick ups to accommodate property and program growth.

Recommendations

For multi-family properties considering a food scrap recycling program, Riderwood Village recommends doing your research. Whether you are in a maintenance, kitchen staff, or management role, it is important to clearly understand what food scrap recycling entails before you start.



Trash room/loading dock area where recycling and refuse are picked up by the collector

This includes asking your current recycling and refuse collector if they provide food scrap recycling collection services, costs associated with these services, and what materials can and cannot be recycled. It is also beneficial to understand the process involved in food scrap recycling. Lastly, it is imperative you identify who from your property will be involved in the process, and how to best educate residents, staff, and management.

For more information visit
www.montgomerycountymd.gov/recycling or call 3-1-1 or 240-777-0311



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Food Scrap Recycling at Multi-Family Properties

Case Study: Rock Creek Village



Background

Rock Creek Village is a 224-unit garden style condominium complex located in Silver Spring, Maryland. Originally built in 1940 to house soldiers, Rock Creek Village converted the property to apartments and then condominiums in the 1980s. In 2016, Rock Creek Village Condominium was recognized by Montgomery County for their outstanding efforts in recycling as they switched from a curbside recycling and trash collection system to a more efficient centralized collection system.

Rock Creek Village was also recognized by Montgomery County in 2017 for their efforts to further reduce the amount of waste generated at their property with the implementation of a pilot food scrap recycling program. Rock Creek Village residents contacted their Homeowner Association (HOA) staff about setting up a food scrap recycling collection and composting program.

Through efforts led by the residents, Rock Creek Village obtained a 14-gallon food scrap recycling collection container and contracted collection service with Veteran Compost to collect food scraps for a three-month pilot program in 2016. Based on the initial success and popularity of this program, the food scrap recycling program was extended in 2017 and added to the Rock Creek Village annual budget.



Process

Rock Creek Village has six trash and recycling areas located throughout the 224-unit property of 31 buildings. The largest trash and recycling collection area in proximity to the management office is where the food scrap recycling collection container is kept for resident use. The other five collection areas direct residents via signage to this designated collection area for recycling their food scraps.



One of six trash and recycling areas at Rock Creek Village

Though the food scrap recycling program was initiated by Rock Creek Village residents, they are no longer involved in management of the program. Maintenance staff routinely monitor food scraps in the central collection container, ensuring they are free of contamination, and that containers are not overflowing. Veteran Compost picks up the food scraps weekly, replaces the food scrap recycling collection container with a clean container, and transports food scraps to their food scrap recycling processing facility. Within the first year of the program, Veteran Compost presented Rock Creek Village with a 12-pound bag of compost farmed from it's collected material. With no community garden, Rock Creek Village donated the compost to Lafayette Elementary School in Washington, D.C.

Education

Staff at Rock Creek Village took a more hands-on approach to educating themselves on food scrap recycling. On-site manager, Edna Kweti, started collecting food scraps in her own kitchen at home. She became familiar with food scrap recycling collection and educated other staff at Rock Creek Village on the process.



On-site Manager at Rock Creek Village, Edna Kweti



Food scraps placed in the food scrap recycling container by residents

To educate residents on their food scrap recycling program, Rock Creek Village sends email notices, posts reminders throughout the property, and labels collection containers with the types of acceptable materials. New residents are informed of the program at each new resident orientation session. This information is also included in their resident manual and shared in the monthly community email blast updates.

Results

Rock Creek Village recycled 3,858 pounds of food scraps in 2017. Since the pilot program began in 2016, nearly 20 percent of residents are participating the food scrap recycling program. Participation varies depending on the season and weather due to the limited placement of food scrap collection containers. Participation is projected to increase with placement of additional containers in all collection areas and with increased awareness of food scrap recycling.

Benefits

The benefit of food scrap recycling at Rock Creek Village is the reduction in the number of trash containers and reduced frequency of trash collection. In addition, maintenance staff have observed a reduction in the frequency of overflowing trash containers throughout the property. This not only reduces trash disposal costs, but it keeps collection areas clean for ease of access for both residents and staff.

Rock Creek Village Management noticed that having a food scrap recycling program benefits the community as a whole. This undertaking by the community did not go unnoticed by the new neighbors, Sunrise Senior Living - Chevy Chase, who sponsored a “Meet & Shred” event, inviting the Rock Creek Communities to bring their boxes of paper to shred, with hopes that the community will find more ways to expand their recycling outreach options.

Opportunities & Lessons Learned

During the first weeks of implementing the food scrap recycling program, the central food scrap recycling collection container disappeared. In response, Rock Creek Village increased education and visibility of its program. This involved email blasts to residents and revising/redesigning food scrap recycling signage in the collection areas.



Posters raise awareness on food scrap recycling in the Rock Creek Village community

Another challenge for Rock Creek Village is limited space for storing central collection containers within its collection areas. This makes it difficult to add a food scrap recycling collection container and provide visibility for the appropriate signage. Rock Creek Village overcame this challenge through strategic placement of the food scrap recycling containers and converting existing trash containers to food scrap recycling containers.

Next Steps

The next step for Rock Creek Village is to expand the capacity of its program. Based on the success of the initial pilot program, Rock Creek Village is looking to increase the size of the food scrap recycling collection container or, more importantly, the number of containers on its property. Placing a food scrap recycling collection container in each collection area will create the convenience necessary for greater participation by residents in the food scrap recycling program. This step requires communication with their food scrap recycling collector, as does increasing the frequency of food scrap collection service.



Recommendations

For those multi-family properties considering a food scrap recycling program, Rock Creek Village suggests talking to residents. Residents are key to the success of a food scrap recycling program. If food scrap recycling is something residents at your property are passionate about, or even just interested in, it is worth pursuing. Their support is useful in developing the program and establishing roles and responsibilities for both staff and residents.

Rock Creek Village also suggests speaking to a food scrap recycling collection company and becoming familiar with the services they provide, and the process involved in food scrap recycling. It is also helpful to discuss the option of starting your program small, such as in a main office on the property. Asking these questions before starting your food scrap recycling program will ensure success.

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