

Policy Brief:
Barriers and Opportunities for Multifamily Dwelling Recycling
City of Scottsdale, AZ

Introduction

The City of Scottsdale reports that diversion in multifamily housing is very low, usually less than 10% (Worth, D. (2017, January 24). Personal interview.). Putting recyclables in the landfill is a lost opportunity to recover valuable resources. Our stakeholder has identified four specific obstacle that contribute to the larger challenge of generating substantive waste diversion among multifamily housing units. The fours areas are ineffective education, a lack of legislative obligation, physical obstacles, and working with existing community recyclers. Each team member has tackled one of these problem areas in this brief.

Barrier #1: Education for Transient Populations

Section authored by Anisa Abdul-Quadir

I work at ASU's Zero Waste department, and my main responsibilities are outreach and engagement. I engage with students not to educate for its own sake, but to communicate with purpose; such that receiving of our educational efforts yields in higher reduction and diversion. Therefore any education that occurs cannot merely flow outward, but it must also support diversion. Like multifamily housing, ASU is also very transient and there are thousands of students with whom we need to engage. In this way, my work at Zero Waste and the challenge the City of Scottsdale faces are similar, therefore I will be tying in my personal experiences into this problem analysis.

What Doesn't Work - A study out of Claremont Graduate School in Claremont, CA studied seven variables that increase recycling behavior: prompts, public commitment, normative

influence, goal setting, removing barriers, providing rewards, and feedback¹. Of those variables, prompts and feedback are closely tied with education and influencing behavior via communication. Schultz and his team found that prompting is not only simple, inexpensive, and unintrusive, it is actually quite effective in increasing recycling. While feedback on behavior has shown to be effective for reducing water and energy consumption, feedback on recycling has not shown to be as effective on diversion¹.

Other ineffectual education methods are presented in the work of De Young et al.³. Raymond De Young and his team presents a slate of engagement efforts to increase recycling and decrease contamination in multifamily dwellings. They found that volunteers distributing information did not increase diversion compared to the control group, and neither did send you postcards with feedback on the residents' performance, reinforcing the Claremont finding. They also found that "size of a multi-family dwelling complex significantly affects the amount of recyclables collected and the level of contamination"³. Smaller complexes (less than ten units) recycled up to three times more and with less contamination than larger complexes. De Young's work is useful for Scottsdale to understand what works and what doesn't with regards to designing and implementing educational efforts.

Attitudes about the environment are also relevant for a recycling program's effectiveness. In their work on the *Social Context of Recycling*, Derksen and Gartrell² found that "individual attitudes toward the environment affect recycling behavior only in the community with easy access to a structured recycling program". This means that resident may care about recycling, but even with education, there is little that will actually get done unless there is a structured program. This rules out the likelihood that drop-off recycling efforts (another facet of Scottsdale's concerns) would be effective in increasing a building's diversion.

So What Works? - ASU's Zero Waste senior program coordinator, Katie Schumacher, served as an Americorps member working on a project to increase recycling in multifamily dwellings in Washington County, Oregon. She shared two efforts that proved very successful for

her project, as well a tip to make education more effective. She and her fellow corps members instituted the Knock and Talk, engaging residents in conversations ⁴. In my own experience, I have found face-to-face conversation to be one of the most effective ways of communicating recycling information that the recipient actually retains. Disseminating mass information (including mailers and social media) is not as effective as meeting with a person, gauging their personal interest, and discussing how they in their own life can act accordingly. The challenge with this approach is that it required a great deal of human time and energy, which most apartments do not likely have. To overcome this, perhaps there could be a Recycling Committee at every apartment that serves this role. The people may come and go, but the institution should still be able to run effectively. Schumacher and her peers also delivered recycling bags to every apartment. On the outside of the bag were pictures of what could and could not be recycled. Residents would then empty their bags into the communal recycling bin, as this was the setup at this particular apartment building. This project was met with much success, particularly regarding the pictures on the bags. Similarly, we at the Zero Waste department have found that students respond far better to pictorial representations of recyclables over written descriptions. Education material that Scottsdale develops or encourages apartments to develop should use pictures instead of words. The final tip Schumacher shared was to have apartments set the precedent for recycling as soon as new resident move in. It can be made a part of the complex tour and be conveyed that it is a part of living there, just as checking mail is a part of the residential experience. By ensuring that managers are consistently keeping existing and new residents education, the City of Scottsdale will not need to target each resident individually. If building managers are the targeted point of intervention, investment will be lower than keeping up with every single resident. Educating transient populations will need to be a constant and continuous endeavor. For apartment buildings, it will need to be established as a regular part of operations and not as a one time-solution.

Barrier #2: Non-Compulsory Servicing

Section authored by Benjamin Numankadic

The City of Scottsdale services single-family homes but does not service places such as apartments or condos due to high cost and low diversion rate. Our goal is to implement these services at all multi-family dwellings. Problems arise from due to multiple different factors. One problem is that there is no room for recycling bins to be placed. Also, the cost of recycling is high and the burden needs to fall on someone. This burden best falls on the city because residents and landlords would not like to see their bills increase.

Increasing diversion in multi-family dwellings is no small task. The core of the problem in Scottsdale is that the service is not there to begin with. This is due to a multitude of factors. For one, residences often do not have the predetermined space allotted for a recycling dumpster. This means that installing one would require a lot of money and time. This puts off many landlords. Also, even if there were locations for people to recycle many people still don't. As mentioned previously this is largely due to the type of people living there. This is a transient population, with high turnover rates that coincide with renting. This is commented on by DeYoung stating “... the lifestyle of apartment dwellers, who tend to be single, young, and mobile...”³. This in turn causes decreased motivation for recycling, especially from landlords and the city.

The way servicing these areas would be possible is to make it cost-free for landlords. This would require the City of Scottsdale to allocate funding for a program such as this. Los Angeles, a city comparable to Scottsdale, has free recycling services for multi-family homes. They created this program on a basis of whoever asks, we will provide. If a residence consists of five or more attached units then they are eligible for city services. This service can only be applied for by a landlord but is free of cost to residents and landlords. They even make it convenient for people by providing bins that do not require anyone to move them for pick-up. It is also a law in California that multi-family dwellings are required to recycle if they produce

more than 4 cubic meters of trash. This idea is something Scottsdale could mimic.

The major problem we run into is that the City of Scottsdale does not want to allocate funds for this recycling service because the diversion rates are so low. This falls back on the education of residents. It is hard to increase diversion in such an environment because the turnover rate is so high. That is why owners need to be extremely proactive in educating occupants, especially newcomers. Education is key for recycling because it teaches the participant why it is so vital to separate your trash. If diversion rates were to increase then City Council members could justify paying for such an expensive service because in the end it helps the community and also makes it a cleaner place.

Another action that could be taken similar to that of the actions taken in California is to make a legal obligation for these apartments or condos to recycle. This puts a lot more pressure on owners to cooperate and will also motivate them to educate their residences. This would take a lot more time to accomplish due to the slow moving process of the legal system, but it would probably be the most effective way in increasing diversion rates throughout the area. If people are obligated then diversion rates will increase.

An interesting idea is that the size of these communities contributes to the amount of recycling people will do. DeYoung³ suggests that in multi-family dwellings, lower rates of involvement in diversion programs, may be due to the non-involvement and anonymity of such a large setting. When there is less sense of community then people are more likely to be selfish because they don't feel they are a part of something. Inspiring the community to help one another and work towards a common goal could significantly increase the amount each single apartment or condo recycles. If they care about their neighbor they will be more inclined to care about the community.

While actions are being taken to better the recycling program, the best things dedicated residents could do is vie for better recycling drop off sites that would be closer to their area to where it would not be a hassle for them to drop off there. This could also be a solution for the

city. If they built large drop off sites near very big apartment complexes then diversion would go up. The strategic placement of such sites and possibly advertisement for them could encourage more people to collect their recycling and take it to a drop off. Once again education becomes one of the main ways to reach out to the people doing the recycling. This is the biggest goal for installing service in these areas. If people understand why to recycle then they will be more inclined to want places for them to do so in their place of residence.

Barrier #3: Physical Barriers

Section authored by Maxwell Ruhnke

. Physical barriers are present in almost all circumstances dealing with recycling for sustainability. They are something that must be considered in order to ensure the success of any endeavor dealing with sustainability. By taking all possible obstacles into account before beginning a project, both time and money will be saved. This paper will cover recycling obstacles in Phoenix's multi-family home environment, one of the worst recycling offenders in the valley. The paper will discuss the overlying issue at hand, purpose possible solutions, recommended ways of moving forward to reach that solution, and provide a rationalization for this approach.

“Phoenix significantly lags behind other cities when it comes to recycling. Of the 10 largest cities in the country, Phoenix's waste-diversion rate of 14 percent last year is at the bottom” (Gardiner 2016). In that the multi-family home environment within Phoenix is one of largest offenders when it comes to its contribution to recycling efforts, it is an issue that must be addressed. One must first acknowledge that most people living in these homes have very little unused living space. “According to Multifamily Executive, as of 2013, the average apartment size today is 982 square feet” (Census 2016). With the average size of a multifamily residence measuring just over 900 square feet, it is easy to argue that every square foot counts and that the

space required for recycling bins within a residence is too much. The idea of installing a large recycling bin within each home may be out of the question although, should a sleek alternative that fits easily under the sink be offered, or even provided, the homeowner may be more open to considering it. Should space under the sink be limited, the building owner may consider installing tastefully designed stackable recycling bins in a corner of each kitchen, or a pull out drawer for a recycling bin in order to further encourage recycling. With building owner and tenant working together to bring some resolution to this matter, the chances of its success increase substantially.

Another obstacle to recycling in the multi-home environment is that people do not know the option to recycle is available to them. This hurdle is easily addressed with very little cost by placing tasteful signs throughout the complex reminding tenants to recycle and where they can find it the necessary bins to do so. In that making people feel involved and part of an effort is a huge step to making it successful one, the more the building owners and managers themselves do to educate and encourage their tenants to recycle, the more successful the recycling efforts will be. Possible ways of further involving the tenants might include a monthly recycling newsletter and/or forming a volunteer resident recycling task force. Education and involvement is key in an environment such as this to improve its recycling numbers.

The next challenge with recycling in a multifamily environment is that it produces more trash bins to be stored and consequently emptied within the residence itself. This subsequently leads to more trips to the residential garbage/recycling bin area. This might not sound that bad if one's trash receptacle is nearby but if one's disposal area is housed down a long stretch of a hallway or is even an elevator trip away, one might do whatever it takes to make fewer trips, even if that means they recycle less. It is imperative that building owners do whatever is feasibly possible to make recycling a stress-free activity for their tenants. Placing recycling bins close to where people park their cars or enter and exit the building provides a stress free-way for people

to add the task of recycling to their day without disrupting their daily activities. Making recycling convenient and easy to master is crucial to its success.

Although physical barriers to recycling do exist, there is a silver lining, and that is that with a little extra thought, effort, and money, these barriers can be reduced. Society is already showing an interest and dedication to this matter, which will help in the efforts moving forward. “Americans generated about 254 million tons of trash and recycled and composted about 87 million tons of this material, equivalent to a 34.3 percent recycling rate.” (SMM 2016) These numbers show an upward trend in recycling compared to the pounds of material recycled in the 90’s. Recycling has also only continued to grow through 2016. With more and more people dedicated to recycling efforts, it will become easier to implement the physical requirements for recycling in multifamily home environments. Multifamily building owners are feeling the pressure to implement more recycling options for their residents and the residents themselves are showing a greater interest and willingness to devoting the time and effort necessary for recycling. By creating more space within the home itself for recycling bins, as well as easy access to a central bin to be used for recycling, physical obstacles are slowly being overcome. If people are provided easy options for recycling and the necessary space to do it, it is highly likely the volume of recycling will increase.

Barrier #4: Community Recycling Expenses

Section authored by Shelbie Draper

In a government sector, money seems to be the main focal point behind most questions on what to do next. The City of Scottsdale is no exception as the municipality struggles to target multi-family housing through “free” community, recycling drop-off locations. It isn’t fair to have single-family residents fund these services through their taxes as they already have monthly trash pick-up fees that they pay for. Therefore the question lies heavily on who, then, will pay for these services? Rather than put the burden on the City or single-family residents or even

multi-family residents, this section of the brief focuses on directing efforts to other stakeholders who will alleviate the pain of money. These actors include businesses both large and small, event planners, schools, and landlords.

Businesses not only have more financial and network resources, but they are also daily stops for residents of Scottsdale. Businesses are nodes for interaction and activity. Almost everyone will need to visit a grocery or appliance store every week, or stop at a local restaurant to have lunch. This is crucial as this means businesses are intervention points for recycling for multi-family residents. As seen in the city of Westchester in New York, retailers must by law have collection bins for plastic bags at the front of their stores (New York, 2010). Other larger businesses must have bins for the recycling of electronics or composting. The costs are covered by the businesses, and make it a simple one trip for Scottsdale residents to recycle everyday items. Scottsdale is also a hotspot for nightlife, with many multi-family residents being young adults. Therefore, bars and pubs in and around Old Town can be required to provide recycling bins at the front of their stores, as well as use biodegradable plates and cups for to-go orders.

Along these lines, Scottsdale has many events that attract large numbers of people throughout the year. These events provide opportunities to recycle great outputs of trash as well as educate the public on recycling through tabling and volunteers. This has been implemented in New York, where it is mandatory to recycle at all street events including block parties and street fairs. A recycling coordinator is also required at each event to create a waste reduction and recycling plan for the event. Fines are imposed if this is not followed by all organizations (New York, 2010). This means that these large organizers will bear the responsibility for community recycling at the time of the large event instead of the City or residents. Schools can take on the responsibility of recycling too by having recycling containers available for not only the students, but the students' families. Schools are large gathering places as well where many people congregate and must go anyways to drop off or pick up their children. This makes the many public and private schools of Scottsdale primary locations for community recycling as materials

have to be picked up anyways. Getting the students and parents involved provides a means of education, and information about what to put in the recycling bin and when it will be available to the public can be announced in newsletters, at PTO meetings, and during class. The city of Washington in Indiana has implemented this tactic at their local schools and have consequently increased recycling in total tons by 17% and earned over \$7,000 in revenue through this method of community recycling (Community, 2011).

Finally, landlords are the first point of interaction between new multi-family residents and the community. Most owners already charge their residents a monthly trash fee, which means this fee can be redirected into increased recycling. Through the example set by many European cities, residents can be given different colored bags every month, with each bags varying in price to get rid of. There would be three possibilities for bagged waste in Scottsdale: trash, compost, and recycling. The price to throw away bags would decrease depending on what was being thrown. For instance, red bags that designate trash would cost \$5 per bag, while blue bags for recycling would only cost \$2. Not only would this decrease the waste in Scottsdale landfills, but it would also cause a necessary change in mindset and ways of life, with a greater focus on doing what is possible to recycle more instead of throw away. Scottsdale can see this method through the City of Phoenix where residents can pay less in fees by switching to a smaller trash can, thus diverting more waste away from landfills (Phoenix, 2015). While these solutions will prove difficult to implement at first, the City will find current barriers possible to overcome.

Conclusion

With a population growth that isn't stopping, waste will continue to grow in the world, with fewer places to push it into. Thus, it will remain one of the biggest sustainability challenges of the times, with only a change from current ways providing a possibility of relief. The City of Scottsdale has recognized this and decided to take action by finding opportunities to divert waste

from landfills and educate the public on recycling and lifestyle habits on the way. This is a great first step in the endeavor to lessen waste.

Endnotes

- ¹ Schultz, P. W., Oskamp, S., & Mainieri, T. (1995). Who recycles and when? A review of personal and situational factors. *Journal of environmental psychology*, 15(2), 105-121. <http://www.scottsdaleaz.gov/solid-waste>
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- ³ De Young, R., Boerschig, S., Carney, S., Dillenbeck, A., Elster, M., Horst, S., ... & Thomson, B. (1995). Recycling in multi-family dwellings: Increasing participation and decreasing contamination. *Population and Environment*, 16(3), 253-267. Community Recycling Program Washington, Indiana. (2011, December 9). Retrieved from http://www.in.gov/idem/prevention/files/success_story_clean_washington.pdf
- ⁴ Schumacher, K. (2017, February 23). Personal interview. New York State Government. (2010). Case Studies: Smart Recycling and Composting. Retrieved from <http://www.dec.ny.gov/energy/57195.html>
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