

Julia Mikuta, Brenda Davis, Jeremy Hitzel, and Dylan Orthaus

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Policy Brief

Scottsdale Waste Management Department Recycling Framework

- *There are several thousand residents in Scottsdale apartments, and condos, the diversion rates are very low, normally less than 10%. We must work with the city of Scottsdale's waste management department to put in a recycling system and provide education to multi-family residences.*

Currently, there are several thousand Scottsdale residents living in apartments and condos. The diversion rates for the housing of this type is very low, normally less than 10 percent. One of the greatest challenges of our time is waste management. The average person generates about 4.3 pounds of waste per day. Individually, this may not seem like a lot but collectively that's over 220 million tons of waste a year in the United States alone (Duke Center for Sustainability & Commerce (n.d.)). The ability to plan, implement, and oversee waste management solutions can be extremely complex. Every given place, community, city, state, and country: is extremely diverse with different values, beliefs, and social norms. Since no place is exactly the same, no one solution to waste management can be used uniformly across mass scales. The City of Scottsdale Waste Management Department (SWMD) must address the municipalities of apartments and condos is the city of Scottsdale, having limited space and services for recycling. Our group has constructed possible solutions for SWMD to help the diversion rate increase taking into the vast amount of concerns from stakeholders involved.

One major challenge in recycling is proper education on how to recycle and why. The educational system about recycling in Scottsdale, AZ multi-family housing is nowhere near as

effective as it needs to be in order to increase the diversion rate. Education outreach to multi-family housing is one key challenge to target because of how it can inspire the community to effectively engage in recycling. It has been stated by the Business Wire that nearly half of the American adult population does not know how, why, or where to properly recycle and must rely on information off the internet. “When people do not know how, what, or where to recycle, it can lead to trash entering and contaminating the recycling stream. It could also lead to recyclable materials ending up in landfills. Further public education on recycling by municipalities is needed to clear up the confusion, promote proper recycling, and thereby increase recycling rates.”(Carpenter, 2016). After assessing different cities educational outreach programs there are a variety of tactics that could be implemented within the city of Scottsdale. The City of Scottsdale Waste Management Department (SWMD) currently has an outreach program to educate individuals who seek out information and then a representative comes to the establishment to do a presentation. Although, after speaking with over 10 multi-family residences and 7 interviews with residents, all stated they have not been exposed to the educational outreach program. The issue of finding a solution to better educating individuals is multi-dimensional. Taking into consideration Scottsdale’s extreme diversity of values, beliefs, and norms is important to consider when designing an educational framework. I conclude the use of social media for educational information and recycling promotion is the most effective course of action SWMD should take in order to improve the diversion rate.

Recycling is not a foreign topic to the majority of individuals subsiding in Scottsdale multi-family residences. However, with advancement in technology recycling has adapted through recent years. Many multi-family residences in Scottsdale have actually stopped using valet recycling due to the fines from improper recycling. In order to explain how to properly

recycle to residents, SWMD must cater to their busy lifestyles. A Scottsdale resident stated, “ I do not value recycling enough to attend an outreach program because I am too busy to take time out of my day” said by Lexi Dell’Orto. Cities with high diversion rates such as San Jose (75%) have acquired recycling as a social norm because of mandates from the state. Although, San Jose does not simply rely on mandates to reach a high diversion rate. San Jose’s waste department helps multi-family residents by implementing programs such as The Green Team program. The city of San Jose takes it upon themselves to assess the problem within a particular residency and provides proper educational material on recycling. Which makes recycling more affordable and easy to understand from recycling presentations in residencies and public forums. Using media as SWMD’s main outlet of information instead of following in San Jose’s educational footsteps has many advantages. Including, saving the city money on brochures, paper, gas, and the time of representatives to visit multi-family residences. Using media as an outlet of information to citizens creates easy accessibility. The majority of Scottsdale residents have access to a technology device 24/7 with correlation to their large average individual income rate of \$72,455 (Scottsdale, Arizona Economy, 2017). One can look at their phones whenever they have free time throughout the day and receive effective information on how to recycle.

Social media also allows individuals to watch short, informative, and creative videos that holds their interests. The lecture like program currently implemented is ineffective from research done on humans memory. “The transfer of information to long term memory for more permanent storage can be facilitated or improved by mental repetition of the information or, even more effectively, by giving it a meaning and associating it with other previously acquired knowledge.” (Mastin, 2010). The attention span of humans has been researched to only last between 10-15 minutes. In today’s society everyone is constantly exposed to information on media, which

allows mental repetition on recycling transferring information to one's long term memory. Simply understanding how to recycle may not be enough for individuals to take action. In today's society individuals have picked up bad habits in their use of resources. People are constantly in a rush and choose to do whatever is in their own personal self-interests. By exposing the negative impacts not recycling can have on the environment, society, and economy will help promote Scottsdale residents to recycle. For example, SWMD can post images or videos of a dead bird from swallowing solid-waste. This will create empathy and encourage citizens to participate in recycling and change their social norm. From the 10 multi-families I contacted including only three stated they have some type of recycling mechanism. Having all residencies in Scottsdale in harmony with recycling with help create a social norm of a desirability to recycle. This will help SWMD increase their diversion rate and better the environment now and for future generations.

The feasibility in addition to the desirability for residential customers to recycle and pay a monthly fee for recycling services depends on a range of factors. The main factors that influence recycling behavior and whether or not it is feasible/desirable, depend on the residential community members: attitudes and beliefs about recycling(importance & inconvenience), subjective/normative social norms, moral norms, and intrinsic satisfactions.(Nguyen, 2017)

When people make decisions on a daily basis; the choices they make revolve around criteria of the amount of investment involved. When it comes to recycling behavior, the decision process includes not only time, money, space and effort; but also the pay-off benefit from recycling. How stakeholders perceive recycling is a huge determinant in the desirability and feasibility to recycle. "Attitudes toward the importance of recycling are positively associated with recycling behavior... Attitudes toward the inconvenience of recycling are negatively

associated with recycling behavior.”(Nguyen, 2017) So the best way to improve recycling behavior would be to ensure it is an important value in the community and also that it is convenient. The value of recycling on the community level is also related to subjective/normative norms. Research “suggests that policymakers should lean on social norms rather than other measures to promote recycling.”(Nguyen, 2017) This is because peer and external pressures can be used as a type of benefit pay-off. “Recyclers get either intrinsic satisfaction for doing the right thing, approval from friends and neighbors for their environmentally correct behavior” (Carlson 2001).

Because the behavior of people is greatly affected by norms, public media campaigns with “attractive communicators” can be used as an application of social pressures (Nguyen, 2017). These campaigns should also be engaging with the community: fun themes, games, prizes, and a positive outlook. Another way to increase social influence could be through recycling clubs that emphasize on intrinsic rewards. In addition, there are a couple more solutions to be suggested that can be used integrated with each other. The use of technology (with apps and social media websites), can help promote public media campaigns. There can also be other contests/lottery incentives both connected and separate from the campaign amongst the various multifamily complexes. Volunteer opportunities amongst students of all ages could also increase recycling behavior as a norm. Other public events can also increase awareness. Overall getting the community involved through engagement and making recycling highly valued to the community would be the best route.

The challenges of recycling is even more prevalent for those living in multifamily complexes in Scottsdale. One reason is because laws that once enforced in some Arizona cities that prohibits the city from providing apartment complexes additional services that will pick up

recycling for tenants. Those times have since ended, and Scottsdale is now analyzing different techniques, strategies, and solutions that can be used to increase diversion rates within multifamily complexes. One particularly prevalent obstacle that is faced in the complexes is the lack of space that is offered for residents to begin practicing separating their waste. Brent J. Oldelk, resident of Arizona and tenant in an apartment complex in Scottsdale, admitted to me in a personal interview that his residence does not offer a waste bin beyond general waste. In fact, Mr. Oldelk actually makes the extra effort to bring his recyclables to his mother's house, which is offered a blue recycling bin by the city waste management service.

Denver is a city that is quite similar to Scottsdale in terms of landfill diversion rates. According to Denver Public Works and Denver Recycles, Denver's diversion rate is only 18 percent, which is hovering right in between many of Scottsdale's surrounding cities' rates. CoPIRG, a nonprofit consumer group that claims to stand up to powerful interests whenever they threaten our health and safety, our financial security, or our right to fully participate in our democratic society, conducted a survey around the city that revealed "over 88 percent of Denver residents find recycling is 'very important or essential.'" This is certainly a majority of the residents, so it raises concern as to why diversion rates may be so low in a city that seems to be so dedicated to the process. Megan Arellano, author for the Denverite journal, asked a few apartment complexes how they go about providing recycling services to their buildings if it is even possible. Nick Costanzo, Chief Operating Officer for Wheelhouse Apartments responded to Ms. Arellano and explained that the three main obstacles that they face are: "1.) space available for a commercial recycling bin in some of our central locations is problematic or non-existent; 2.) recycling bin sizes offered by vendors are not the correct size for the space; 3.) as third-party managers we do have ownership groups that have not given approval for the addition of

recycling for various reasons” (Costanzo 2017). Other real estate managers have also confirmed the issue regarding space constraining recycling efforts at times. John Smidt, broker and owner of Deerwoods Real Estate Management, figures only about one-third of his multi-family complexes recycle regularly. The newly developed knowledge of expanding current apartment residences to accommodate new waste bins is one solution that can attempt to be applied to existing structures, but some cities have zoning that would not allow such an expansion for at an affordable rate.

There are a number of possible solutions that can be implemented to increase recycling participation in multifamily complexes in Scottsdale and throughout the nation. Greg Williams, Major Account Executive for Alpine Waste & Recycling, predicts that the most effective solution will likely be time. In further detail, Williams says that newer apartment buildings that are currently being built have been including more space for a recycling program to be implemented. New buildings with infrastructure that is focused on easing the process of diverting landfill waste in apartment complexes in Scottsdale will be something that will have a positive effect on the city’s annual landfill diversion rate. This is a solution that does not seem impossible for Scottsdale because there are often so many new apartment buildings taking the place of the old, so to revamp a building with the mindset of implementing a recycle space will have a positive correlation with the landfill diversion rates.

While the construction of new apartment buildings plan to make space for recycling is a possible solution, there is still an issue found within the existing multi family housing throughout the city of Scottsdale. Single family and multi family housing do not receive the same services from the city. This means that there are apartment complexes in the city of Scottsdale that receive waste pickup, but don’t have the option of having recycling services. This puts a bind on

residents as they are forced to either skip recycling entirely, or drive their personal recyclables to a local drop off.

Like mentioned earlier, one of the main issues with this is the space available, or space not available within these multi family housing communities. New complexes are being built with recycling in mind and are designed with enough space to have the proper recycling containers, but the issue still remains with the existing complexes. Currently waste collection services charge on a per pickup basis pickup. Rather than paying for the individual container to be picked up, one solution may be charging an annual fee for collection services rather than charging for individual containers. By having an annual fee, the apartment complexes may be more willing to offer the recycling services, as they would be paying less money throughout the year.

According to the Waste Management website in an article elaborating on multi-family waste services. The company mentioned that they have compactor monitoring. This gives them the ability for wireless monitoring to reduce the number of pick-ups (“Multi-Family Solutions”). The wireless monitoring would ensure that the containers will only be picked up when the containers are full. This solution would help mitigate the cost of paying for individual container pick-ups. The wireless monitoring would ensure that the containers are only picked up when they are full, saving money for the apartment complexes. While the “smart containers” would be high tech and advanced, they would also come with an extremely high cost. Perhaps a more reasonable method and solution could be to simply mandate the same services between single family and multi-family homes throughout the city of Scottsdale.

The City of Scottsdale Waste Management Department is more than aware of the diversion issues being so low. By creating a new recycling system framework that highly values

recycling as a whole, multi-family residences diversion rates and recycling behaviors can increase and become more efficient. This will result in not only in bettering the city today but also for future generations to come. However, since no one community and waste management plan is the same and because today's society is rapidly evolving, there is, of course, a lot of room for error in our framework. Because our group took into account many stakeholders concerns this allowed possible errors to be minimized; but much of the information collected could be noted as outdated and as new research is found, our framework could change. However, the manner in which the City of Scottsdale presents, decides, and implements solutions in multifamily residential complexes with stakeholder perceptions in mind, will be the ultimate key to the success of a new waste management practice.

Bibliography

"About CoPIRG." About CoPIRG | CoPIRG. Ed. Kathryn Lee. N.p., n.d. Web. 23 Feb. 2017.

Arellano, Megan. "Why Denver apartment buildings don't recycle." *Denverite*. Denverite, 05 Jan. 2017. Web. 23 Feb. 2017.

Carlson, A. (2001). Recycling Norms. *California Law Review*, 89(5), 1231-1300.

doi:10.2307/3481159

Carpenter, Mark. "Nearly Half of U.S. Adults Do Not Have Information on Recycling Available to Them." *Business Wire*. ISRI, 30 Dec. 2016. Web. 22 Feb. 2017.

Division: Solid Waste Management: Recycling. N.p., 2015. Web. 23 Feb. 2017.

Duke Center for Sustainability & Commerce. (n.d.). How much do we waste daily? Retrieved February 23, 2017, from center of sustainabilityduke.edu/resources/green-facts-consumers/how-much-do-we-waste-daily

Mastin, Luke. "Short-Term Memory and Working Memory - Types of Memory - The Human Memory." *Human Memory*. N.p., 2010. Web. 14 Apr. 2017.

"Multi-Family Solutions." *Wm.com*, www.wm.com/enterprise/commercial-property/multi-family-solutions.jsp. Accessed 23 Feb. 2017.

Nguyen, T., The Ninh Nguyen, Hoang Viet Nguyen, Antonio Lobo, & The Son Dao.

(01/01/2017). *Sustainability (basel, switzerland): Encouraging vietnamese household recycling behavior: Insights and implications* MDPI Publishing. doi:10.3390/su9020179

"Waste Programs Division: Solid Waste Management: Recycling." ADEQ: Waste Programs

"Scottsdale, Arizona Economy." *Best Places*. Sperlings Best Places, 2017. Web. 22 Feb. 2017.