

Recycling Contamination in the North Shore.

A report prepared at the request of the North Shore Recycling Program, in partial fulfillment of the requirements of UBC Geography 419: Research in Environmental Geography, for Professor David Brownstein.

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Background about recycling contamination:

Human population and innovative technologies are increasing, creating growing waste in landfills. However, some waste products can be recycled and are recycled around the world. There are certain guidelines on proper recycling that have to be followed in order to achieve desired results. Yet, many people recycle incorrectly creating problems, such as contamination. Recycling contamination is a term referred to items placed in bins that cannot be recycled or materials disposed of in the wrong recycling carts (Vantol, 2011). Recycling contamination is a significant problem and is most common in multi-family dwellings (MFDs). To compare to single-family dwellings (SFDs), MFDs have lower participation rates and higher contamination rates (Vantol, 2011). The problem exists around the world. Many different levels of governments and corporations have tried to tackle the problem of contamination. In some cases proposed solutions were successful, however in some they were not.

A municipal agency - The North Shore Recycling Program offers recycling services to North Vancouver. Their mission is “to make conservation second nature on the North Shore by moving the community from environmental awareness to sustainable action” (North Shore Recycling website). The agency comes across the problem of recycling contamination extremely often. Thus, they would like to be informed of the reasons behind increased recycling contamination rates in MFDs and solutions that were successfully used in other areas, as well as some that were not, in order to overcome the barriers the agency experiences.

Barriers and Solutions:

Recycling contamination is created from a variety of reasons. Some of the existing barriers are physical and some are psychological. In different cases there are certain circumstances that make a problem to occur and solution to work. Thus, it is important to keep in mind that there is no solution that will work for ever case.

First of all, one of the reasons for increased recycling contamination in MFDs is because most of the residents are tenants and not owners (Kelleher, p.22). Therefore, the attachment and ownership feelings are different from owners of a property. Maria Kelleher states that renters feel less attached to their homes, because they are “not as invested in the community as property owners” (p. 22). However, a study by Ando and Gosselin discovered in their surveys that people have “very similar properties to recycling when they are not at home” (p. 429). This shows that ownership is not the main causation of improper recycling patterns.

Some of the ways to create the sense of ownership can be through activities that will encourage participation from the tenants. This will help create a “community” on a smaller scale. Thus, further increasing the sense of belonging and responsibility (me).

In addition, as Maria Kelleher discovered in a Toronto case study, many residents that occupy MFDs are immigrants or citizens that come from the surrounding cities. Also, people that rent, tend to relocate more often than people that own a property. For example, in Greater Vancouver Regional District, Delta is the only municipality that recycles plastic codes numbered 1 to 7, but all the other surrounding cities only allow codes 1, 2, 4 and 5. This creates confusion for people that may have moved from Delta, because they were educated and used to recycle products

differently. Similarly with people that move from a different city, province and even country.

In order to decrease the possibility of misunderstanding, clear labeling in the area with recycling containers is one of the key aspects to overcome this barriers. For example, locate labels on recycling bins, as well as on the wall adjacent to the recycling facility in addition to providing tenants with a brochure ("Better Practice Guide," p. 15). Moreover, making informational brochures available in different languages will further prevent some people from missing or not understanding crucial information on proper recycling (Parfitt, p. 35; Recycling, p. 8). It is also important to include as many pictures as possible in brochures, in order to overcome the barrier of language that may exist. This will work well if the brochures are not available in many languages (Lopez, p. 3). By providing brochures in many languages or including many pictures in the information sheets will help to reach and educate more people. The brochures and information sheets should include not only what to recycle, but what not to recycle (Lopez, p.11).

Also, many people experience lack of motivation towards decreasing recycling contamination (Plutchok, p 20). I think, it has to do with lack of education. People have to know what they improve by recycling correctly and what happens if the recycling bins become contaminated. Some tenants are, simply, not interested in recycling correctly, because they see no benefit in it ("Multifamily Recycling: Barriers," p.2). This is why it is important to relate the problem to the tenants. Increase their sense of belonging and sense of responsibility for their action. This way, people will feel attached and responsible; thus decreasing recycling contamination.

Moreover, it is important to enforce the rules that may be set in place for educating and convincing people about proper recycling (Plutchok, p.14). It is crucial because people may do what is asked of them in the beginning, but many go back to their “normal” recycling patterns after a period of time. However, continuously reminding and educating people will create a habit, which will not require further enforcement. (Plutchok, p.14). Yet, due to the mobility nature of the tenants, constant oversight may be necessary.

Furthermore, recycling services in MFDs can be less convenient than in SFDs. People living in MFDs, more often than not, have to bring the recyclables to a basement or garage, where usually such facilities are located. As Maria Kelleher states: “drop-off recycling only gets a third to half the capture rate of curbside service which is very convenient” (p. 22). Even though it is referred to the amount of recyclables and not recycling contamination, this example can be applied similarly to contamination. A study, which included surveying people living in MFDs, has shown the factors that decrease time and cost of recycling has positive impact on recycling overall, including contamination (Ando, p. 426).

One of the solutions that may be used in newly developing buildings is to create storage for recycling bins on each level of the buildings. The manager would be responsible for transferring the waste to the main storage area (“Better Practice Guide,” p. 37). An advantage of such strategy is that the manager will be able to “closely monitor contamination and identify repeated offenders or the need for further education” (“Better Practice Guide,” p. 39). However, it can become very inconvenient for the manager to regularly transfer the waste to communal storage area. Ongoing

management is very important in this case, in order to keep the area clean, since it can be located closely to the units. Also, in case the bins become heavy, it can create health hazards to the caretaker, since it has to be manually moved to the main storage area ("Better Practice Guide," p. 40). Another way managers can contribute to a decrease in recycling contamination is by checking the recycling bins daily and sorting the items (Zalentsnik, p.12).

In addition, recycling containers must be located next to the garbage dumpsters in order to decrease the distance people have to walk. Also, the area has to be clean, attractive and well lit. This will decrease the number of people from avoiding the area. It will also make the experience seem less unpleasant. People would not mind spending a little bit more time in the area sorting out the items, rather than doing a quick and incorrect job (Lopez, p.2).

The study conducted by Ando and Gossele stated that, on average, MFDs' distance from a home to a recycling bin is more than twice greater than in SFDs. However, the study also found that the distance from homes to the bins did not change the overall results of the recycling. There was only a minor variation, and in some cases higher floors recycled even more in comparison to the lower ones. Yet, the study suggests to consider this, as people usually do not make the second trip for recycling (Ando, p.434). Also, in the SFDs, people have more exterior storage space for their recyclables, than in MFDs (Ando, p.429). Lack of storage space can be due to a certain layout, conflict of use, health, fire codes and more ("Multifamily Recycling: Barriers," p.2).

Furthermore, it can be assumed that residents living in MFDs are economically less fortunate. It was thought that renters in such buildings are less educated about recycling programs, however it is not the case, says Samantha MacBride. Low income associates with specific housing characteristics, such as services provided by the staff members. Managers that are responsible for maintaining the buildings usually have significant amount of responsibilities, but at the same time, incompatible wage (MacBride, p 13).

On the other hand, the study done by Ando and his colleague found that recycling activities are more positively correlated with age and education. For instance, people that are subscribed to newspapers are more likely to recycle and recycle correctly than people that are not. Yet this could be connected with higher income or more recyclable paper available for recycling (Ando, p.432).

Further, as the North Shore Program outlined, an additional reason for increased contamination in MFDs is the anonymity factor. People may think they can get away with recycling incorrectly, because nobody will identify them. To compare to SFDs, the neighbors are the witnesses (Vantol, 2011).

In order to overcome this barrier, it is important to decrease anonymity in MFDs. Numbered bins can be created for each apartment or unit. This way, everyone will know exactly who is recycling incorrectly and the offenders can be penalized or educated ("Better Practice Guide," p.15).

In addition, many people are only concerned about money. If they do not benefit financially, then they see no reason in doing anything. There is no financial incentive

that people see. They think there are no charges applied for garbage and recycling (Lopez, p.11).

In this case, informing tenants that their garbage bill is included in their rent, may help people to see a financial incentive to recycle. The information sheet can also include a note stating that higher rent can be resulted from the increase in contamination; explaining that it will cost the apartment owner more money to deal with the issues (Lopez, p.11). Moreover, managers who show significant improvement in their buildings could be offered “public acknowledgement and a small cash reward” for their achievements (Zaletnik, p.14). Furthermore, as can be seen recently, people are becoming more environmentally friendly, which can also be used to decrease recycling contamination. For example, outlining environmental degradation caused by recycling contamination, may trigger some people to be more careful about how they recycle (Lopez, p.11).

Similarly to tenants, managers can be relocating often as well. New managers require education and they need to be encouraged to participate (Hamilton county, p. 12). This can have an effect on the maintenance, cleanness and overall state of a building. Property managers are crucial to a successful program, because they are responsible for distribution of information, technical assistance and education (Plutchok, p.14). Thus, targeting property managers and educating them first will improve the chances of success. Similarly, commitment should be encouraged in managers, because this way, they will be more likely to share their knowledge with the tenants (Plutchok, p. 21). Also, to consider, this means that more responsibilities would be added to the employees` (“Multifamily Recycling: Barriers,” p.1). However, volunteers

can be hired and become involved in helping managers (Recycling, p. 22). Similarly, in Toronto, Environmental Volunteer Programs have engaged in outreach and education. This can help to maximize the efficiency and achieve greater results (Zaletnik. P. 25).

A study done by Raymond De Young states that the contamination rate highly depends on the size of the dwelling. He says that smaller buildings, less than ten units, have fewer recycling problems, including contamination. He also mentions that newspaper recycling was not effected significantly by contamination in any of building sizes (p. 263).

A suggestion was made to promote building smaller MFDs in the future. This is because smaller environments are easier to manage and change. Also, anonymity factor can be decreased in smaller buildings (Young, p. 265).

There are many solutions that can be applied to all of the problems that are identified in this paper. First of all, education is a key component to achieving success. For instance, in Toronto case study, they used training sessions to educate, mainly, managers about proper recycling, but tenants were allowed to attend the sessions too. The study stated that “73 people have attended the training sessions and 44 people have submitted the volunteer application forms.” However, the author did not outline the number of people that were invited to come, the overall number (Kelleher, p.18). Yet, it is still a significant number of managers, which are properly educated and ready to apply their knowledge. Even more important is the “ongoing” education, considering the mobile nature of residents form MFDs. Yet, the problem of tenants not paying attention to the available information, because they may “know” everything, can be a significant one (“Multifamily Recycling: Barriers,” p.1). Moreover, education of the younger

generation is also important. For example, incorporating a fun and educational day at school few times a year would help in the future decision making. For high school students, creating lectures or contests can be a possibility (Zlenko, p. 25)

Moreover, targeting new residents is important. For example, the City of Davis, in Saskatchewan, Canada, identifies new residents by looking at phone services. Thus, when people create a new telephone line, brochures or educational booklets can be sent to the address. In Portland, Oregon, it was determined that if people received a specific feedback the contamination rate decreased ("Multi-Family Buildings: Barriers, p. 5).

Some other, less significant on its own solutions, but which play an additional role in educating people are advertising. Creating effective newsletters is one way to go. In my opinion, it is important to outline the usefulness of recycling, how to recycle correctly, as well as the benefits of proper recycling and effects of incorrect recycling (Recycling, p. 10). This way, people will see the difference they can make and the consequences they may contribute to. However, it is suggested to provide people with informational brochures "a minimum of once or twice per year" (Plutchok, p.14). In case people loose a copy or new tenants move in, everyone will have a copy to refer to. In addition, if the brochures are image-based, it will have greater success at reaching a bilingual population (Plutchok p.21).

Moreover, providing people with "promotional items" like pens, magnets and calendars that potentially can be seen often, will constantly remind people of proper recycling (Lopez, p. 3). Some of the best practices that were identified in Plutchok`s report were "move-in" and "move-out" kits for tenants. Also, a program was established

that provides incentives for recycling correctly. Similarly, tenants can receive incentives if the whole building significantly decreased the contamination rate (Plutchok, p.15). A help line and website can also be established, to help people with guidance. Lastly, surveys and focus groups can help increase knowledge, as well as receive feedback on situation and improvement (Kelleher, p.18). To keep in mind, such ways of communication will have limited impact on its own. Yet, it will add to success if used with more first hand solutions (Parfitt, p. 36).

Another way to advertise and decrease recycling contamination is by providing people with bags that have compartments inside. This way, I think, it may be more convenient for people to sort the recyclables at home, and only unload the items when near the bins. The bag can also have images of what to recycle and what not to. In addition, the back can be used for ads, possibly related to recycling. That way, more money could be raised and the price of the bags can be reduced for people or eliminated (Zaletnik, p.15).

Conclusion:

Many barriers were identified in the paper, as well as many solutions. However, it is important to keep in mind that different cities and buildings will react to a solution differently. This is why there is no “one size fits all” solution available for recycling contamination. Moreover, education is the key to understanding and tackling the problem. Many other solutions that were identified, serve as “helpers” to education.

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