

# **Multi-family Recycling in Ashland, OR**



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## Introduction

For this project, Isabelle and Kennedy utilized Recology Ashland to improve recycling methods and implement recycling education in multi-family complexes in Ashland, OR. They worked with Jamie Rosenthal, the Waste Zero Coordinator at Recology, and the multi-family complexes they worked with were the Ashlander Apartments and CPM (Commercial Property Management). Recology Ashland is a company that manages disposal processes and services, but their focus was on recycling services of Recology. Waste Zero is Recology's approach to resource recovery such as recycling. Waste Zero means making the best and highest use of all resources and using those resources wisely, generating waste only as necessary, and finding ways to use waste products in ways that benefit the environment. The project focuses on the approach and concept of Waste Zero and incorporates it into multi-family recycling.

A multi-family complex is defined as an apartment, condominium, mobile home park, or a building with four or more units that share a common solid waste receptacle. A small multi-family complex has 10 or fewer units, medium has 11-30 units, large has 31-99 units, and a very large complex has 100 or more units (De Young et. al, 1995). CPM owns both small and medium units while the Ashlander Apartment complex is a very large complex containing a total of 160 units. In order to reduce waste, it is important to ensure that tenants are recycling correctly and not causing contamination in the recycle bins.

Recycling is often difficult in multi-family complexes due to the size of building, tenant participation, and contamination issues. Multi-family complexes pay for garbage and recycling removal, so there is little financial incentive for tenants to care about their waste (Miller 2006). In residential neighborhoods, owners pay for garbage and recycling services, so they are more

conscious of how they dispose of their waste. This project addressed these issues, and educational materials were created as a tool for tenants to improve recycling habits.

A main issue with recycling is contamination of items in recycle bins. This is a problem because when Recology's employees can see contamination, they will not collect the bins, and this happens occasionally. This can cause the owners of the multi-family complexes to complain about tenants not recycling properly and become frustrated because they don't have proper knowledge about how to handle overflowing recycle bins. The three major items that contaminate recyclable materials are food, plastic bags, and food contaminated packaging such as pizza boxes and to-go food packaging. When items in recycle bins are collected and put into the recycling truck, hidden bags full of food or contaminated waste can break open and contaminate other clean and recyclable materials. When items with grease or food residue on them are disposed of in recycle bins, they can come in contact with other items and make them unrecyclable. Even though items are sorted through and unrecyclable materials are removed before they go through their recycling process, items that have come in contact with grease or food waste can be unrecognizable and not removed. The process of waste paper recycling involves water. Items that have oil on them from grease and food waste can ruin an entire batch because the paper fibers will not be able to be separated from the oils in the paper recycling process.

## **Methodology**

As stated above, there are five parts to this project that addressed all of the project objectives. The first part was a policy that was revised for Recology to use in order to improve recycling methods at multifamily complexes. The current city ordinance for Ashland Oregon is

“9.22- Opportunity to recycle site standards”. This has not been updated since 1992. The current city ordinance was revised in order to bring it up to date and decrease the amount of waste sent to landfills. Things that were added to the ordinance include: a purpose in order to highlight that all complexes need to have an opportunity to recycle site because a lot of CPM multi-family complexes don't have them; how many recycle bins each type of complex must have; owners must give tenants recycling education materials such as the handout that was created; stickers that include a list of recycling materials must be present on the lid of the recycling bins and if they are worn down, they must be replaced; information on Recology including how they are on call if tenants or owners have questions and how they can provide information on workshops about recycling; and a statement of how the lid on the cardboard receptacle must be closed in order to prevent water from rain getting on the cardboard.

Second, there was a survey conducted at the Ashlander Apartments, which is a very large apartment complex. The goal was to survey as many tenants as possible. This survey was done by sending out a mass email to all tenants at the Ashlander Apartments Complex. As an incentive for tenants to complete the survey, they were entered into a raffle to win a \$10 gift card to a local coffee shop. The survey was developed during the month of December, using Google Forms as a platform. The questions in the survey can be seen in Appendix D. below. Once it was completed, the information from tenants was used to see if there are any other methods that can be implemented to make recycling easier for them. The survey was completed at the end of March. During this time, educational materials such as the handouts and signs were implemented.

Third, a one-page informational handout was created and given to managers to put within the new tenant move-in packets who are moving in with CPM and the Ashlander Apartments. Once the draft was completed, CPM, the Ashlander Apartments, and Recology needed to accept it or revise it as needed. The sections in the handout included an intro, an explanation of why recycling is important, a list of what can and what can't go into the commingle bins in Ashland, home tips on how to incorporate recycling into one's daily life, a list of what can and what can't go into the commingle bins in Ashland, and a list of resources that Recology offers for other recyclable items such as electronics, household hazardous waste, and bulky items such as appliances and furniture.

Fourth, small recycling signs were created for Recology. These signs included a recycling sign for commingled items and a separate sign for garbage. The recycling sign includes pictures of items that are common to recycling at home such as toilet paper rolls, cans and bottles, newspaper and magazines, dish soap bottles, and plastic food containers. At the bottom of the sign, there is a section that states "Items Must Be Clean and Rinsed" in order to help reduce contamination. The garbage sign includes simple pictures of items that are found in recycle bins common but are not recyclable and it also includes items that can contaminate others easily including pizza boxes, to-go containers, caps and lids, styrofoam, and frozen food containers. At the bottom of the sign, there is a section that states "Please Throw Away Items Contaminated with Food Residue and Grease." These signs were placed above recycling bins in the dumpster areas of the Ashlander Apartments and at a few CPM multi-family complexes. The signs that were placed at the Ashlander Apartments were laminated on 11" by 17" sheets of paper and printed and laminated at the Southern Oregon University Print and Copy Service. They were

framed by the maintenance staff at the Ashlander Apartments in order to keep them from wearing down from the weather. Each of these signs cost \$4 each, with a total of \$16. Once the design of the signs were approved by Recology, it was copied and printed in the middle of March. After they were printed, the signs were placed above recycling bins at the Ashlander Apartments. The signs for the CPM apartments were placed above recycling bins at the beginning of April. Putting these signs up needed to be approved by CPM so it took more time to put them up than originally planned. The recycling signs were also added to the tenant move-in packets at the Ashlander Apartments and CPM. Tenants can use the signs if they choose, to help them recycle properly.

Lastly, trash observations were conducted at the Ashlander Apartments to track changes in contamination throughout the implementation of the educational materials. Data was collected by looking in recycling bins and the dumpster. Contamination in the bins and recyclable items that were in the dumpster were noted. The audit began in January 2017 and was performed every other week between January and May. Performing a frequent trash audit provided data overtime to test the effectiveness of the educational materials given to tenants and determine what the main contaminants were.

## **Results and Discussion**

The survey was emailed to 100 tenants and there was a total of 45 responses. The responses have been helpful in determining how to reduce contamination in the recycling bins. The data showed that tenants care about recycling and want to learn more about how they can decrease contamination. The majority of responses concluded that informative signs and knowledge of where recycling bins are located would be helpful. Tenants also indicated that

recycling bins closer and outside of buildings would make them more likely to recycle. This was found to be difficult in large and very large multifamily complexes because it puts a large responsibility on the landlord. When the policy was revised we were able to take tenants thoughts and opinions into account.

The trash observations were done over a span of 3 months, every other week. Within every audit, there was some sort of contamination issue. We discovered that most of the cardboard in the recycling bins were items that can't be recycled such as frozen food containers or cardboard with a waxy coating. Another issue discovered was glass was placed in plastic bags and then in the glass bin which contaminated all of the other glass causing it to not be recyclable.

For the revision of the ordinance, Kennedy and Isabelle attended Re-TRAC Connect's webinar on "The Secret to, Managing a Successful Mandatory Recycling Ordinance". The webinar consisted of understanding ordinance components such as recycling requirements, education and training, signage, and container requirements. They also explained how waste characterizations can be done in order to understand exactly what waste is being sent to landfills. A mandatory recycling ordinance is implemented in phases so that there is time for elements of the ordinance to settle into the city. After this webinar, it was clear that Kennedy and Isabelle couldn't add everything that was needed to be added and revised on the ordinance. So suggestions were created for Recology that they could use to help improve the ordinance.

Suggestions for the improvement of the City of Ashland's recycling ordinance is to establish future goals on reducing waste sent to landfills. This can be done by starting with waste characterization studies and determining goals for multifamily complexes. As an incentive to landlords to reach this goal, diversion discounts and rebates can be offered. Diversion discounts



are based on service frequency and volume of waste managed. A rebate can be given at the end of the year for goals that have been met. Community support within the city is also very important. This includes working with key stakeholders such as multifamily property owners, public service departments, waste management, and city officials. Over time as the ordinance is implemented inspections will need to be done to keep up with the goals. Continuation of education is also very important. Recology could provide educational workshops to tenants and multifamily complex owners so that they are reinforcing good habits.

## **Conclusion**

Recycling is important because it saves energy, reduces greenhouse gas emissions, reduces the amount of waste in landfills and incinerators, saves money since creating products from raw material is more expensive than creating products from recycled material, and so, it allows products to be used to their fullest extent (U.S. Environmental Protection Agency [EPA], 2016). As the world population increases, people are buying more products and as a result, more waste is being created. A lot of products and their packaging are not recyclable or biodegradable. Recycling reduces the need for raw materials such as wood and minerals and making products from raw materials uses a large amount of energy. For example, a one-liter plastic bottle requires 5.6 and 10.2 million joules of energy which includes all energy outputs such as transportation, energy for keeping the water cold, and manufacturing the plastic (Zyga, 2009). The manufacturing process and transportation of plastic bottles makes up most of the energy output, but by recycling plastic bottles, it can save more than twice the amount of energy that is needed to manufacture or incinerate it (Zyga, 2009).

Recycling at multifamily complexes is difficult because there are many people sharing recycling bins. This increases the risk for contamination and increases the amount of waste contributed to landfills. A goal of this project was to discover how residents in multi-family housing feel about recycling and what methods could be implemented to improve contamination issues. The results have shown that many people care about recycling and want to know more. The majority of tenants surveyed at the Ashlander Apartments concluded that they would like to know more about recycling and wanted informative signs displayed on the bins. Another large portion explained that they would like to know where the recycling bins are at the time of move in as well as an informative guide to recycling. Other goals of the project were to make a small impact within the Ashland community, educate tenants on recycling properly and the importance of it, and reduce contamination in recycling bins. All of the goals of this project were reached. The results from the trash audits performed after the recycling signs were placed above bins and the informational handouts were placed in tenant move-in packets concluded that these educational materials were successful in educating tenants because there was less contamination in the bins.

## **Appendix A - Stakeholders & Professional Contacts**

Jamie Rosenthal - Recology Ashland Waste Zero Coordinator, [JRosenthal@recology.com](mailto:JRosenthal@recology.com)

## **Appendix B - Recycling signs. Handout, and Policy**

- Insert pictures of final signs and handout
- Link to Policy

## **Appendix C.- Multifamily Recycling Survey**

Link to survey:

<https://docs.google.com/a/sou.edu/forms/d/e/1FAIpQLScmVU1KOSY3n1WLOHLjiKYUoLbDLVONMjIA81x3WXnSXYzX1g/viewform>

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