
Waste Characterization Report

SE Health Center, Multnomah County

Date of Sort: April 21, 2009

Prepared by: Michelle Metzler
Waste Prevention and Recycling Coordinator, Multnomah County

Waste Sort Team: Ben Duncan, Nina Katovic, Kari Lyons, Rich Maher, Michelle Metzler,
Katy Pranian

Objective:

The objective of the waste sort is to determine the potential for additional recycling opportunities. By sorting materials in the garbage, opportunities to recover materials using existing recycling systems and through the creation of new systems for recycling, composting and waste prevention can be identified.

Current Performance:

Current recovery opportunities: Paper, metal, plastic, glass, plastic film, batteries, electronics, rigid plastics, CD's, furniture.

- 2008 SE Health Center paper and containers recycling rate: 23%
- 2008 Health Department average paper and containers recycling rate: 28%
- 2008 Multnomah County average paper and containers recycling rate: 29%
- Multnomah County recycling goal by 2010: 65%

Methodology:

On April 21, 2009, a team of volunteers evaluated a sample of waste from the SE Health Center. Garbage is hauled three times per week from the SE Health Center. The sample is two full days worth of garbage (Friday 4/17, Monday 4/20). Although the sample included recyclable material, the sample only included material from the garbage collection container. The sample was sorted into the following categories: mixed paper, aluminum cans, plastic bottles, glass bottles/jars, aseptics, plastic bags/film, CD's, toner, polystyrene, reusable goods, compostable papers, compostable food items, non-recyclable containers, and other non-recyclable materials. Each of these material groups were weighed and cataloged. The following report details the material composition of the sample and makes recommendations based on the findings¹.



Weight data was collected utilizing an A & D FK150 series bench scale, independently calibrated by AAA Scale of Portland, Oregon, to collect weights to the nearest 1/100th of a pound.

¹ Note: Both the findings and recommendations are cited in terms of weight, not volume.

Findings:

The eleven categories of materials are grouped into one of the four following categories: **Paper**, **Containers** (aluminum cans, plastic bottles, glass), **Other Recyclables** (plastic bags/films, CD's, toner, reusable goods, compostable food/fiber), and **Non-recyclables** (food trays, cups, garbage). Figure 2 shows the percent by weight of each of these four general categories.

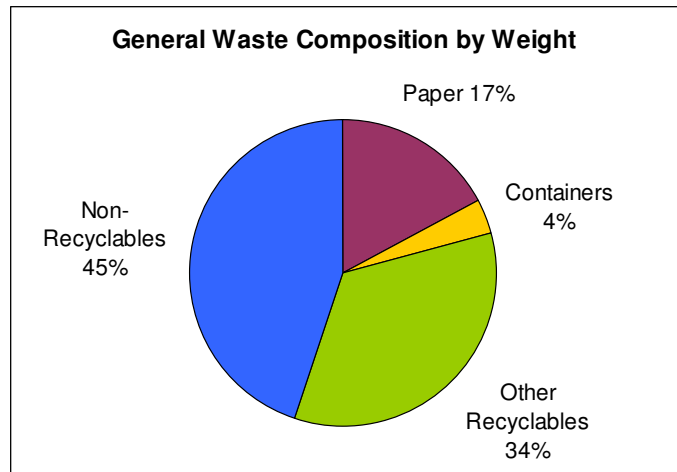


Figure 2: Percentage of Waste Stream by Weight

The following is a breakdown of weight percentage represented by each category.

<u>Recyclable Fibers</u>	<u>Lbs.</u>	<u>Percent of Waste Stream</u>
➤ Mixed Paper	17.0 lbs	17.2%
<u>Recyclable Containers</u>		
➤ Aluminum Cans	0.3 lbs	0.3%
➤ Plastic Bottles	2.0 lbs	2.0%
➤ Glass Bottles	1.1 lbs	1.1%
➤ Aseptics	0.1 lbs	0.1%
<u>Other Recyclables</u>		
➤ Plastic Bags/Films	5.3 lbs	5.4%
➤ Compostable Foods	9.4 lbs	9.5%
➤ Compostable Fibers	17.7 lbs	17.9%
➤ Toner Cartridge	0.1 lbs	0.1%
➤ Polystyrene	0.4 lbs	0.4%
➤ CD	0.1 lbs	0.1%
<u>Non-Recyclables</u>		
➤ Non-recyclable containers	4.1 lbs	4.2%
➤ Garbage	40.4 lbs	40.9%
<u>Total Sample</u>	<u>98.7 lbs</u>	<u>100%</u>

The following chart (Figure 3) shows the distribution of the specific materials in the waste stream by weight.

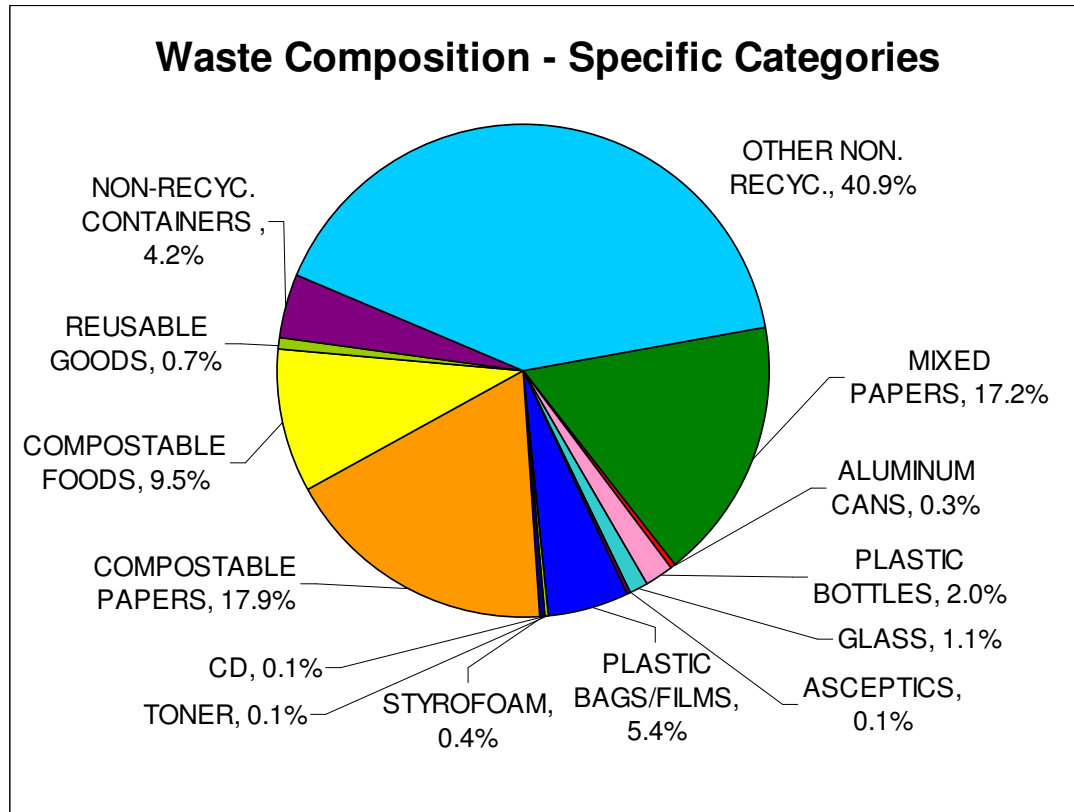


Figure 3: Percentage of composition by specific material categories

Observations & Recommendations:

Two full days worth of garbage filled less than half of the 3-yard dumpster used for garbage collection at the SE Health Center. The garbage is normally emptied every Monday, Wednesday, and Friday. The garbage pickup was cancelled on Monday 4/20 for the waste sort, yet the dumpster was still less than half full. The SE Health Center should consider checking the level of garbage each Tuesday and Thursday evening for one month to see if Friday 4/17 and Monday 4/20 generated a normal amount of garbage or if this amount was lower than normal. Three times each week Multnomah County pays \$27.48 to have this container emptied. If it is confirmed that the dumpster is being over emptied, collection could be reduced to twice weekly service and would save Multnomah County \$109.92 per month and \$1,319.04 annually.

The findings from this waste evaluation suggest that there are several materials that might be targeted to help reduce the amount of waste generated by the SE Health Center.

Because sufficient recycling bins and signs exist in this facility, more employee education is needed. Consider assigning one person from the SE Health Center to be in charge of the recycling programs. Utilize the support that the Sustainability Program and the Health Department Sustainability Liaison can provide.

Mixed Paper: Mixed paper should be a target for increased recycling. Paper is easily recycled in the commingled bins and accounted for 17.2% of the waste. Paper in this sample included office paper and a full box of paper education materials. See Figures 4 and 5.

Recommendation: Consider sending out a building wide email that discusses what papers can be recycled and invite the county's waste prevention and recycling coordinator to your staff meetings to provide employees with information about which paper can be included in the commingled recycling.

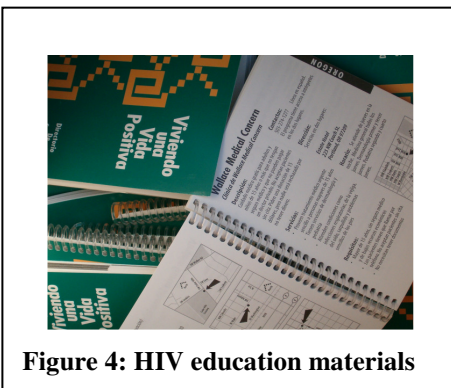


Figure 4: HIV education materials



Figure 5: Mixed paper



Figure 6: Paper Towels

Compostable Food and Fibers: A high percentage of the garbage was compostable material (27.4%).

Recommendation: Consider educating staff and clients about the wastefulness of excessive paper towel use and encourage individuals to use fewer paper towels when drying their hands, to bring in their own reusable towel, and to allow their hands to air dry.

To help divert food scraps, consider creating an onsite compost collection or encourage individuals to bring their food scraps home for composting.

Plastic bags/films: Plastic bags represented a significant volume of the garbage and composed 5.4% of the waste by weight.

Recommendation: Consider collecting plastic film and bags for recycling. If collected separately in a clear plastic bag, plastic bags and film may be recycled with the commingled recycling.

Glass: Glass bottles only made up 1.1% of the sample, but is an easily recycled material. Although there are glass recycling collection containers inside the SE Health Center, there is not a glass recycling roll cart.



Figure 7: Plastic Bags

Recommendation: Consider requesting a glass roll cart to recycle glass or encourage employees to take glass home for recycling.

Aluminum Cans & Plastic Bottles: At less than 3% these materials appear to be getting adequately captured. However, because bottles and cans are so easily captured and are regarded as a high value commodity, additional steps to ensure that participation is maintained may be worthwhile.

Recommendation: Ensure that on-site staff is aware of comingled recycling collection.

Appendix A: Glossary of Sort Categories

Aluminum cans – Containers made of aluminum, including containers for beverages and other materials.

Compostable foods/fibers – Includes vegetables, fruit, meats and dairy, paper fibers.

Ewaste – All types of waste containing electrically powered components. This includes computers, televisions, VCRs, stereos, copiers, fax machines, clocks, keyboards, phones, and other electronic products.

Glass bottles/jars – Containers made of glass exhibiting a neck or threaded top.

Magazines – Publications printed on glossy paper

Mixed paper – Office paper, paper board/soft cardboard, folders, scrap paper, sticky notes, shredded paper, paper bags, newspaper and all other non-corrugated cardboard.

Non-recyclable containers – Included containers not made of metal or glass or plastic bottles. Examples include carry out food containers, water and soda cups. These materials are also known as “true waste” because there are currently no recycling options for these materials.

Other non-recyclable materials – All other non-container materials that can not be recycled including non compostable food waste, plastic utensils, bathroom paper towels, ballasts, and plastic trays. These materials are also known as “true waste” because there are currently no recycling options for these materials.

Plastic bags/film – All bags including grocery, trash and sandwich bags. Also includes shrink wrap, plastic pallet wrap, and bubble wrap.

Plastic bottles – Plastic containers with a neck, including containers for beverages and other fluids.

Rigid Plastics – Plastic CD or DVD cases, plastic crates, and receipt spools.

Steel/tin cans – Containers made of steel or tin, most often non-refundable metal beverage and food containers.