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PSU Market Center Building LEED EB Materials Audit Report

Christa McDermott
Portland State University

Emily Murkland
Portland State University

Bryan Nguyen
Portland State University

Tay Stone
Portland State University

Rushada Wimer
Portland State University

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PSU Market Center Building LEED EB Materials Audit Report

Assessed on behalf of: Portland State University's Campus Sustainability Office

April 2018

Christa McDermott
Emily Murkland
Bryan Nguyen
Tay Stone and Rushada Wimer

Director
Projects Manager
Materials Assessment Project Manager
Materials Assessment Assistants

Community Environmental
Services

Portland State University

PO Box 751—CES
Portland, OR 97207

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Executive Summary

This report provides Portland State University's (PSU) Campus Sustainability Office (CSO), with an objective third party LEED O+M Materials Assessment of PSU's Market Center Building (MCB). The data collected for this audit provides CSO with insight into the building's current waste composition and diversion rate. Additionally, it identifies opportunities to reduce the amount of recoverable materials ending up in the landfill stream. Community Environmental Services (CES) conducted material audits for 100% of MCB's landfill-bound, commingled recycling, glass bottles and jars recycling, and compost streams during a 24-hour period.

Highlights from the report include:

- The overall diversion rate for the Market Center Building is 80.4%
- The compost stream had the lowest diversion rate at 55.3%, which significantly impacted the diversion rate of the Market Center Building as a whole.
- The commingled recycling and glass bottles and jars recycling streams maintained very high proper diversion rates at 94.8% and 73.9% respectively.
- There was a significant amount of single-use food serviceware and single-use hot and cold drink cups in the landfill, accounting for approximately 15% of the stream's overall volume.

Based on these key findings, recommendations by CES to improve CSO's current systems within MCB include:

- Improve proper diversion of compostable materials by performing outreach to MCB's offices
- Reduce intact food waste by encouraging departments to begin an in-office food-share program
- Create a Bring-Your-Own Mug campaign and encourage the use of durable to-go boxes available in MCB to reduce single-use food serviceware ending up in the waste streams
- Distribute mugs from the reuse room (if available) to all new employees of MCB

Section 1: Background

In December of 2017, Brandon Lesowske of Portland State University's (PSU) Campus Sustainability Office (CSO) contacted Community Environmental Services (CES) to conduct a LEED O+M Materials Assessment of PSU's Market Center Building (MCB) located at 1600 SW 4th Ave, Portland, Oregon 97201. CES is a research and services unit at Portland State University, specializing in materials audit and diversion improvement education.

The objectives of the current LEED materials audit are as follows:

- Determine the composition of MCB'S material streams which include landfill bound, commingled recycling, compost, and glass bottles and jars recycling.
- Assess the materials generated from a time period that reflects typical business operations. The audit includes hand sorting the material streams into specific categories, weighing sorted materials, recording the data, and making qualitative and quantitative observations.
- Determine MCB'S material diversion rates based on the material audits, and make recommendations to improve diversion practices for each material stream.
- Provide documentation for LEED O+M credit application under the "Materials and Resources: Solid Waste Management – "Waste Stream Audit" credit section of "Operation and Maintenance."

Market Center Building's Current Diversion Plan

MCB houses multiple PSU-affiliated departments, a ground-floor lobby area, department kitchenettes, and lunch areas. Led by CSO, all of these areas have been allocated standardized and buddied waste stream collection bins. These centralized locations are utilized by staff to empty their desk-side landfill and recyclable materials and are serviced by MCB's custodial staff.

CSO oversees waste diversion at PSU and is in charge of a number of campus-wide waste diversion programs and events including two "reuse rooms" and an end-of-year Chuck-It for Charity event geared toward the student body. CSO also hosts a campus-wide in-house Climate Champions certification program that various PSU departments can opt into, which incentivizes staff to reduce their waste. Free desk-side recycling bins are offered to departments upon request. In addition, CSO utilizes the Finance and Administration office located within MCB to engage with other departments within the building to provide them with waste diversion program updates or related reminders.

Materials generated by MCB are collected by Republic Services. Landfill-bound materials are collected five days a week, Monday through Friday and are stored in two 2-yard containers. Commingled recycling is picked up five days a week, Monday through Friday and is stored in one 3-yard container. Glass is serviced once a week on Thursdays and is collected in one 65-gallon roll cart. Compost is serviced twice a week on Tuesdays and Thursdays and is collected in one 65-gallon roll cart.

Section 2: Sort Methodology

Four materials stream audits were conducted by CES staff for MCB, which included material audits for landfill-bound materials, compost, commingled recycling, and glass bottles and jars recycling. The material audits date and time periods were chosen to reflect materials generation during typical business hours over the course of 24-hours at MCB. The tenants were not informed of the material audits in advance to avoid differentiation in materials generation and practices. CES worked with building management to ensure that the time period of generation was not subject to variations in building-occupant activities.

The material audits for all streams were conducted by CES staff on March 9th, 2018. CES sorted one day's worth of compost and true waste and two-day's worth of glass and commingled recycling. To account for a single 24-hour period of generation for commingled and glass bottles and jars recycling, CES utilized the following formula:

$$[\textit{stream poundage}] / 2 (\textit{collection period in days}) = \textit{representative 24-hours of materials generation}$$

All materials were sorted by CES staff in accordance with the LEED O+M waste audit requirements. The material categories used for the audit are detailed in the materials categories section.

Material Categories

For the audits, materials from each stream were sorted into twenty-five (25) material categories listed in Table 2.1 below. A detailed description of each material category is provided in [Appendix A: Glossary of Material Categories](#).

<i>Commingled Recycling</i>	<i>Compost</i>	<i>Additionally Recoverable</i>	<i>Non-Recoverable</i>
Corrugated cardboard	Food scraps	E-waste	True waste
Mixed paper	Intact food	Reuse	Restroom waste
Plastic bottles & tubs	Compostable bags		Single-use hot cups
Mixed metals	Yard debris		Single-use cold cups
Glass bottles & jars			Single-use food serveware
Aseptics			Plastic film
			Rigid plastic
			Food-soiled fibers
			Styrofoam
			Liquid
			Foam core board
			Catering lunch boxes
			K-cups/creamers

Table 2.1: Material categories

Twenty (20) of the material categories listed in Table 2.1 were utilized according to LEED O+M and CES standards. The **additional five (5) categories**: Aseptic, yard debris, foam core board, catering lunchboxes, and K-cups/creamers were chosen due to their observed presence in the materials stream during the sorting process. Materials that make up a significant portion of the waste stream are highlighted and addressed by CES in [Section 3: Observations](#) and [Section 4: Findings](#) in order to discuss the opportunities for reduction and diversion associated with these material categories.

The four (4) general material classifications take into account the existing diversion opportunities in the Portland Metro Region and at MCB. These classifications are further defined as:

Commingled recycling materials are required to be recycled by businesses under the Metro regional government's business recycling mandate. Please note that in the Metro region, glass bottles and jars are recycled separately from the commingled recycling and any other commingled category listed. This dual stream method of recycling glass bottles and jars separately allows for better quality and viability of recyclable materials as products and commodities. Commingled recycling materials are collected by Republic Services.

Compostable materials are items that are accepted under Metro's current compostable material guidelines for commercial businesses. In addition to food scraps, Republic Services also accepts food-soiled fibers.

Additionally recoverable materials are those that have the opportunity to be recovered through an expanded diversion program or an existing non-primary hauler diversion system at PSU. Please note that all additionally recoverable materials are unacceptable in the commingled recycling stream.

Non-recoverable materials are those that cannot be diverted from the landfill through PSU's existing collection systems' markets and/or processing facilities. In addition, some of these items such as plastic film and rigid plastics can experience fluctuations in recoverability due to the volatility of global secondary commodity markets and are sometimes more readily recyclable than during other times.

Section 3: Observations

The following qualitative observations were made for each material stream. Associated photos can be found on the proceeding page.

Walk through photos

1. Centralized buddied waste streams were found in public areas as well as in kitchenettes of each department with eye-level signage (see Image 3.1)
2. Durable dishware and glassware was abundant in all kitchenettes observed (see Image 3.2)
3. Coffee urns were available in a number of the office suites (see Image 3.3)
4. Kitchenettes had refrigerators for perishable goods (see Image 3.4)



Image 3.1: Centralized buddied waste streams with signage at eye-level



Image 3.2: Durable dishware and glassware

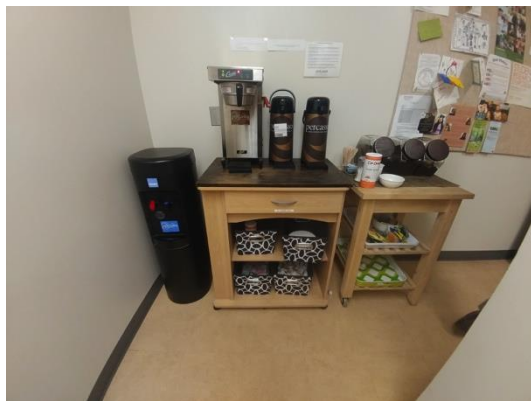


Image 3.3: Coffee urns in MCB kitchenette

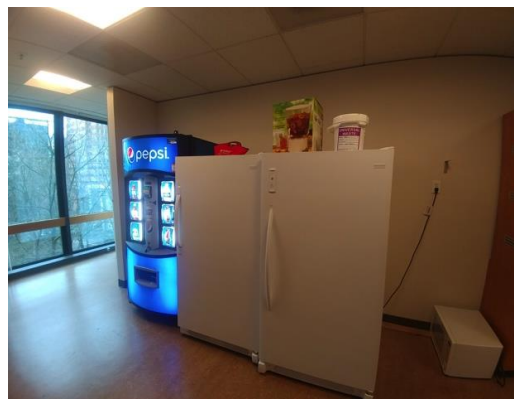


Image 3.4: Refrigerators in an MCB kitchenette

Key Waste Stream Observations

1. Intact food comprised mostly of unspoiled fruit was the third largest item in the landfill-bound stream (see Image 3.5)
2. Single-use food serveware as well as single use hot and cold cups made up a large portion of the landfill-bound load by volume (see Images 3.6, 3.7, and 3.8)



Image 3.5: Landfill-bound intact food



Image 3.6: Landfill-bound single-use food serveware



Image 3.7: Landfill bound single-use hot drink cups



Image 3.8: Landfill-bound single-use cold drink cups

Section 4: Findings

Findings resulting from the material audits are cited in terms of the material weight in pounds. Please note that lighter materials such as plastic film, Styrofoam, plastic bottles and tubs, and single-use drink cups/serviceware can contribute to a large percentage of volume in the waste stream, yet when considered by weight alone, these materials may not appear as a significant component of the load.

All Streams Combined

The combined weights of all streams—landfill-bound, commingled recycling, compost, and glass bottle and jar recycling—generated over 24-hours of operation at Market Center Building—totaled 181.57lbs (see Table 4.2 on the next page).

By accounting for the misplaced materials from any given stream, a clearer picture of the true rate of diversion for that material stream emerges. Table 4.1 shows that 94.8% of commingled recycling and 73.9% of glass bottles and jars recycling materials found throughout the load were being properly diverted. For compostable materials, only 55.3% of materials were properly placed in the compost stream while the majority of the food scraps and food-soiled fibers were found in the landfill-bound stream. MCB's diversion rate overall was around 80% (see Figure 4.1).

CLASSIFICATION	TOTAL GENERATION	PROPERLY DIVERTED	DIVERSION RATE (%)
Commingled Recycling	68.30	64.74	94.8%
Glass Bottles & Jars	5.14	3.80	73.9%
Compostable	38.03	21.04	55.3%
Streams Combined	111.47	89.58	80.4%

Table 4.1 Diversion rates by stream

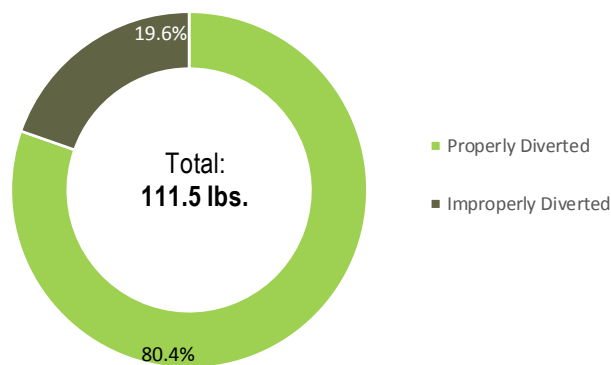


Figure 4.1: Visual of properly diverted versus misplaced divertible materials by percentage

The proceeding subsections provide more detail on each individual material stream, presenting data collected from each of the materials audits. Findings from the landfill-bound, commingled recycling, glass bottle and jar recycling, and compost streams are presented separately in Table 4.2.

MATERIAL	LANDFILL-BOUND		COMMINGLED		GLASS BOTTLES AND JARS		COMPOST		
	Lbs.	%	Lbs.	%	Lbs.	%	Lbs.	%	
RECOVERABLE MATERIALS	MIXED PAPER	1.77	2.1%	42.06	60.4%	-	-	-	-
	PLASTIC BOTTLES & TUBS	1.06	1.3%	2.50	3.6%	0.07	1.7%	-	-
	CORRUGATED CARDBOARD	-	-	18.74	26.9%	-	-	-	-
	MIXED METALS	0.56	0.7%	1.41	2.0%	0.03	0.8%	-	-
	ASEPTICS	0.08	0.1%	0.03	0.0%	-	-	-	-
	GLASS BOTTLES & JARS	0.76	0.9%	0.58	0.8%	3.80	97.6%	-	-
	TOTAL	4.23	5.0%	65.32	93.9%	3.90	100.0%	-	-
	FOOD SCRAPS	9.08	10.8%	0.03	0.0%	-	-	18.98	79.3%
	INTACT FOOD	7.88	9.4%	-	-	-	-	1.04	4.3%
	YARD DEBRIS	-	-	-	-	-	-	0.08	0.3%
COMPOSTABLE BAGS	-	-	-	-	-	-	0.94	3.9%	
TOTAL	16.96	20.2%	0.03	0.0%	-	-	21.04	87.9%	
OFFICE REUSE	0.95	1.1%	0.77	1.1%	-	-	-	-	
	E-WASTE	0.86	1.0%	-	-	-	-	-	-
TOTAL	1.81	2.2%	0.77	1.1%	-	-	-	-	
NON RECOVERABLE MATERIALS	TRUE WASTE	11.47	13.6%	2.14	3.1%	-	-	-	-
	FOOD-SOILED FIBERS	12.24	14.5%	0.48	0.7%	-	-	2.59	10.82%
	SINGLE USE FOOD SERVICEWARE	5.84	6.9%	0.24	0.3%	-	-	0.30	1.25%
	RESTROOM WASTE	22.65	26.9%	-	-	-	-	-	-
	SINGLE-USE HOT DRINK CUPS	4.06	4.8%	0.05	0.1%	-	-	-	-
	FOAM CORE	-	-	0.26	0.4%	-	-	-	-
	SINGLE-USE COLD DRINK CUPS	1.24	1.5%	0.09	0.1%	-	-	-	-
	K-CUPS	1.17	1.4%	-	-	-	-	-	-
	LIQUIDS	0.54	0.6%	-	-	-	-	-	-
	PLASTIC FILM	1.04	1.2%	-	-	-	-	-	-
	RIGID PLASTIC	0.13	0.2%	0.15	0.2%	-	-	-	-
	CATERING LUNCH BOXES	0.78	0.9%	-	-	-	-	-	-
STYROFOAM	-	-	0.08	0.1%	-	-	-	-	
TOTAL	61.16	72.7%	3.48	5.0%	-	-	2.89	12.08%	
GRAND TOTAL	84.16	100.0%	69.58	100.00%	3.90	100.00%	23.93	100.0%	
ALL STREAMS COMBINED	181.57								

Table 4.2: Overall composition of combined materials streams

Landfill-bound Stream

A total of 84.16 pounds of landfill-bound materials were generated over 24-hours of operation at Market Center Building. Figure 4.2 and Table 4.2 present the material weights according to the material categories outlined in [Section 2: Sort Methodology](#).

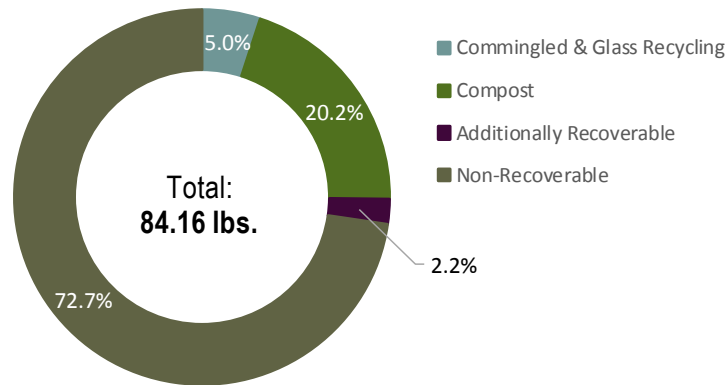


Figure 4.2: Landfill-bound stream general composition

According to the data, 27.3% of the landfill-bound materials could have been diverted through MCB's existing recovery systems including compost, commingled recycling, glass bottle and jar recycling, and their additionally recoverable programs.

Compostable materials made up 20.2% (16.96lbs.) of the landfill-bound materials, while **commingled recycling** and **additionally recoverable** materials made up just 7.2% in aggregate. **Non-recoverable** materials comprised the largest portion of the category at 72.7% (61.16lbs.) of the landfill-bound load and comprised largely of restroom waste and true waste. Within restroom waste, multiple half-used rolls of toilet paper were found, which heavily influenced the weight of those materials. Additionally, single-use food serviceware along with single use cold and hot drink cups made up approximately 15% of the load by volume (see Image 3.7, 3.8, and 3.9).

All Recoverable Streams

The commingled recycling, glass bottles and jars recycling, and compost streams all had very little contamination, with the highest contamination rate being within the commingled recycling stream at only 6.9% signifying strong understanding of what types of materials belong in these streams. However, one caveat to reiterate is that 20.2% of the landfill stream was comprised of compostable materials, indicating that there is more education needed to promote proper diversion of compostable materials to the compost stream.

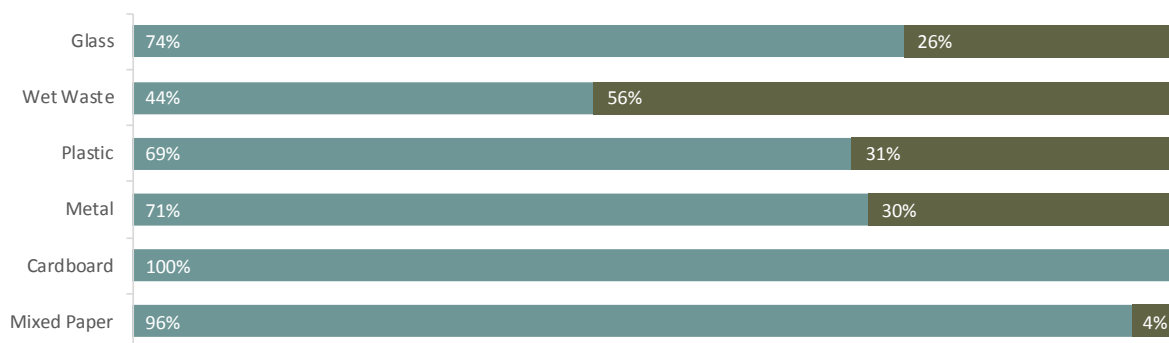
Section 5: LEED O+M Materials Generation and Diversion Table

Table 5.1 and Figure 5.1 show the material categories according to the LEED O+M Materials Generation and Diversion guidelines. Please note that some LEED O+M category definitions differ slightly from those used in CES analyses, see the “LEED O+M Materials Generation and Diversion Table Glossary” in the following pages. The Waste Stream column gives the total weight of the specific material regardless of which material stream it was deposited in. For example, the Cardboard weight is a combination of cardboard found in the commingled recycling, glass, and landfill-bound streams. The Percentage of Total Waste Stream column displays how much of the building’s entire waste stream is comprised of that material. The Waste Diverted column gives the weight of the specific material that was properly diverted to the recycling stream. For example, the Plastic weight is the amount found in the commingled recycling stream alone. The Percentage of Waste Type Currently Diverted from Waste Stream column displays the percentage of each specific material that was properly diverted. This indicates, for example, that approximately 44% of Wet Waste was properly diverted. Please note that ‘Other Waste’ does not have figures for the Waste Diverted or Percentage of Waste Type Currently Diverted from Waste Stream columns because Other Waste is not divertible within Market Center Building’s existing diversion systems.

Figure 5.1 provides the diversion rate of each material for which a diversion system currently exists at MCB. It is clear that there is room for improvement in some materials’ diversion rates in terms of their collection and diversion practices, particularly in regard to Wet Waste.

Waste Type	Waste Stream	Percentage of Total Waste stream	Waste Diverted	Percentage of Waste Type Currently Diverted from Waste Stream
Metal	2.00	1%	1.41	71%
Mixed Paper	43.91	25%	42.09	96%
Cardboard	18.74	10%	18.74	100%
Glass	5.14	3%	3.80	74%
Plastic	3.63	2%	2.50	69%
Wet Waste	53.25	30%	23.55	44%
Other Waste	52.22	29%	N/A	N/A
Total	178.88	100%	92.09	

Table 5.1: LEED Materials Generation and Diversion rates



LEED O+M Materials Generation and Diversion Table Glossary

Metal – Containers made of aluminum, steel, or tin, including containers for beverages, food, and other materials; this includes aerosol cans and clean aluminum foil.

Mixed Paper – Office paper, newspaper, magazines, phonebooks, paper board/soft cardboard, folders, scrap paper, sticky notes, shredded paper, paper bags, egg cartons, cereal boxes, and all other non-corrugated cardboards; this includes aseptic containers such as gable-top milk and juice cartons and square-shaped cartons often used for soups or soy milk.

Corrugated Cardboard – Corrugated boxes or sheets used for shipping and packaging materials.

Glass – Bottles and jars made of glass.

Plastics – Plastic bottles and tubs; this includes containers for beverages and other fluids, plastic tubs of primarily food grade plastic often used for yogurt, margarine, and other food or non-food materials, rigid plant pots larger than four inches, and plastic buckets five gallons or smaller.

Wet Waste – Vegetables, fruit, grain-based food scraps, meat, fish, fat, bones, eggshells, coffee grounds and paper fibers contaminated with food, including coffee filters, soiled napkins, soiled paper bags, that meet the guidelines set by City of Portland Bureau of Planning and Sustainability. This is the definition that LEED uses for wet waste. The solid waste community may define wet waste differently. It is sometimes defined as a general mix of landfill-bound materials, which is in contrast to 'dry waste,' or construction materials such as wood, metals, and glass, and other recyclables.

Other Waste/Miscellaneous – This category includes both non-recoverable materials (single-use drink cups, single-use food containers, restroom waste, liquid, etc.) and other recoverable materials (rigid plastics, plastic film, office reuse/donatable materials, printer toner, polystyrene expanded foam block, and polyethylene expanded foam sheets.)

Section 6: Discussion

The quantitative data in [Section 4: Findings](#) paired with observations in [Section 3: Observations](#) indicates that CSO's current commingled recycling diversion program and glass bottles and jars recycling program are highly successful at proper diversion rates of 94.8% and 73.9% respectively. In conjunction, the overall diversion rate in the Market Center Building of 80.4% is higher than most office buildings of similar size and use. The largest opportunity to greatly reduce the materials sent to the landfill is by focusing primarily on composting, while supplementary steps can be taken to address the voluminous single-use food serviceware items found in the landfill-bound stream.

Only 55.3% of compostable materials throughout all streams were properly diverted. A majority of the compostable material found in the landfill-bound stream was made up of food scraps (10.8%) and intact food (9.4%). The amount of compostable materials found in the landfill rather than the compost stream may be occurring for a number of reasons including:

- Ease of access to deskside landfill containers to dispose of soiled paper materials;
- Not utilizing an in-house food sharing program to help curb intact food waste

Currently, each centrally located buddied waste collection area in kitchenettes includes a compost receptacle. Each receptacle has signage either on or near the receptacle itself made up of numerous photos showing the types of material that are/are not recoverable in the compost stream (see [Image 3.1](#)).

However, while there is a norm association with appropriately diverting commingled recycling materials, depending on office/department, there may not be the same norm around composting food scraps. CSO could utilize the Finance and Administration communication stream to encourage staff to compost more diligently.

Since there was a significant amount of intact food waste being sent to landfill, it is key to promote a food-sharing or "For Anyone" program in kitchenette areas both for perishable and non-perishable goods to curb food waste stemming from food not being eaten or taken out of its packaging at all (see [Image 3.6](#)).

Single-use food serviceware along with single-use hot and cold drink cups made up a substantial portion of the load by volume (see [Images 3.7, 3.8, and 3.9](#)). Staff should be encouraged to either take durable mugs with them to these outside vendors or to make coffee and tea in-house and utilize the durable mugs and glassware in kitchenettes. Much of the single-use food serviceware found in the load are likely stemming from the nearby food cart pod. CSO can encourage the use of durable to-go boxes, which can be found in the lobby floor kitchenette area as well as in some departmental office kitchenettes. CSO can consider providing each department a small number of these to-go boxes if they are not currently offered in order to make it more convenient and top-of-mind for staff to utilize.

Lastly, there were a number half-used rolls of toilet paper within the restroom waste that greatly attributed to the weight of the overall category. Janitorial staff are likely replacing partially-used rolls with fresh rolls in attempts to ensure that stalls do not run out of toilet paper prior to the end of the day. It is worth considering a change in replacement protocol or coming up with a secondary use of these rolls to mitigate their premature disposal. Furthermore, in efforts to decrease restroom waste, paper towels in restrooms could be replaced with hand dryers.

Section 7: Recommendations

These recommendations are based on findings and observations from the Market Center Building. The reasoning behind these recommendations can be found largely in Section 6: Discussion. Primary recommendations from CES include:

Improve Composting Diversion Rates

- **Reduce the amount of compostable material in the landfill-bound stream by reminding staff what is/is not allowed in the compost stream.** Compost collection significantly weighed down the overall diversion rate due to the large amount of compostable materials misplaced into the landfill-bound stream. Within the landfill-bound stream, compostable materials accounted for 20.2% of all the materials observed.
 - Use the Finance and Administration Office's communication conduit to send a staff update that will remind staff to correctly divert items into the compost bin. Be sure to offer staff relevant examples of the correct items to divert in order to ensure people do not mistakenly contaminate the stream (e.g. pizza boxes or plastic-coated to-go boxes).
 - Remove deskside landfill collection containers to prevent temptation of disposing of fibers in this way

Reduce waste of intact food by promoting a food-sharing program.

- **Intact food items made up 9.4% of the landfill-bound stream and an additional 4.3% of the compost stream, which leads to over 8 pounds of intact food waste in a 24-hour period.**
 - Encourage departments to implement a "For Anyone" program by designating shelf space in the refrigerator for perishable items and counter or table space in the kitchenette area for non-perishable items. They could also place this material in the ground-floor kitchen area if lack of space is a limiting factor.

Encourage use of Durable Food and Drink Containers

- **Promote the durable dishware and glassware currently offered in MCB to mitigate the amount of single-use material ending up in the landfill.** Single-use food serviceware and hot/cold drink cups made up a significant part of the landfill-bound stream by volume. Considering single-use to-go ware lacks opportunities for recycling, it is essential to reduce the quantity of single-use items being used. Providing durable to-go containers in the offices and encouraging mugs already found in the kitchenettes could reduce the amount of single-use food serviceware within the waste streams
 - Provide offices with their own set of durable to-go boxes if not already offered with a reminder that using durables reduces waste and also falls in line with the PSU Climate Champions program as one of many ways to receive points.
 - Push messaging that exemplifies the importance of reducing the use of single-use items when durables are available (see Image 7.1 on the following page).
 - Start a "BYOM" (Bring Your Own Mug) challenge between offices to incentivize participation in single-use waste reduction (see Image 7.2 on the following page).
 - Distribute mugs from the reuse room (if available) to all new employees of MCB.



Image 7.1: Example of coffee messaging campaign
Source: Lafayette College



Image 7.2: Example of a BYOM challenge
Source: Queen's University Belfast

Reduce Restroom Waste

- **Mitigate unused toilet paper waste by encouraging janitorial staff to change it less frequently.** Within the restroom waste, CES observed multiple rolls of unused toilet paper that seemed to have been thrown out in order to be replaced by a full roll. Another approach to reduce this waste is to consider it for a second use prior to its disposal (e.g. use it to clean a spill or crumb debris) and have janitorial staff set it aside.
- **Remove paper towel waste by switching to hand dryers.** Further reduction of restroom waste is removing paper towels from restrooms and installing hand dryers for restrooms.

Improve Diversion of Commingled Recycling

- **Offer only desk-side recycling bins for new employees. Employees would have to request desk-side trash bins.** The landfill-bound stream was comprised of 5% recycling materials, particularly mixed paper and plastic bottles and tubs. By offering only desk-side recycling bins, employees would need to physically dispose of their trash in the centralized buddied waste stream collection bins.

Appendix A: Glossary of Material Categories

Aseptics – Containers such as gable-top milk and juice cartons and square-shaped cartons often used for soups or soy milk. This category is an accepted material in the commingled recycling.

Creamers/K-cups – single-use tea and/or coffee creamers as well as coffee grounds or other hot beverage mixes encased in plastic capsules or packets that are used in a special coffee maker to brew one cup at a time. K-cups are a mixed-material product that is non-recyclable and non-compostable as it contains both plastic and organic matter.

E-waste – Discarded electronics such as central processing units (CPUs), monitors, televisions, cell phones, microwaves, radios, printers, fax machines, cords, and related office equipment.

Catering lunch boxes – Single-use to-go lunch boxes supplied for catering events that cannot be recycled or composted due to plastic lining.

Corrugated cardboard – Corrugated boxes or sheets used for shipping and packaging materials.

Foamcore board – Lightweight polystyrene filled paper board

Food scraps – Vegetable, fruit, grain-based food scraps, meat, fish, fat, bones, eggshells, tea bags, and coffee grinds.

Food soiled fibers - Paper fibers contaminated with food, including soiled napkins, soiled paper bags, and paper towels. This category includes items such as pizza boxes and waxed cardboard. All fibers are non-compostable.

Glass bottles and jars – Bottles and jars made of glass. This category can be split up between redeemable and non-redeemable glass depending upon whether it is accepted under Oregon’s Bottle Bill. This category excludes light bulbs, flat glass, flower vases, drinking glasses, window glass, and tempered glass such as baking dishes.

Intact food – Food that is not spoiled and would have potential for food donation, rather than disposal.

Liquid – Liquids that were in containers in the load.

Metals – Containers and metal pieces made from any type of metal except aluminum; includes metal containers as well as scrap metal.

Mixed paper – Includes office paper, newspaper, magazines, phonebooks, paper board/soft cardboard, folders, scrap paper, sticky notes, shredded paper, paper bags, egg cartons, cereal boxes, and all other non-corrugated cardboards. This category may include or exclude aseptic materials such as gable-top milk and juice cartons and square-shaped cartons often used for soups or soy milk in this report. In figures or tables where aseptic containers have been called out in their own category, the mixed paper category excludes aseptics.

Plastic bottles and tubs – Plastic containers with a neck, including containers for beverages and other fluids; plastic tubs of primarily food grade plastic often used for yogurt, margarine, and other food or non-food materials, rigid plant pots larger than four inches, and plastic buckets five gallons and smaller.

Plastic film – All clean plastic film bags including grocery and sandwich bags. Also includes shrink-wrap, pallet wrap, bubble wrap, and plastic films.

Reuse – Items that may be reused through donation to a program or by in-house programs such as for office supplies or furniture.

Restroom waste – Bathroom paper towels and other related items.

Rigid plastic – Non-bottle and non-tub shaped plastics that are not accepted through the regional commingled recycling programs, but are acceptable at various plastics recycling facilities in the region. Includes plastic pallets and spools.

Single-use hot/cold cups – Non-durable, non-recyclable single-use cups for either hot or cold beverages. These cups may be made of plastic, plastic-lined paper, plastic-embedded paper, expanded polystyrene foam, or compostable plastics.

Single-use food serviceware – Non-durable containers, plates, dishes and flatware designed for single use and used to serve and transport food. These may be made of plastic, plastic-lined paper, plastic-embedded paper, expanded polystyrene foam, or compostable plastics

Single-use restaurant serviceware – Non-durable containers, plates, dishes and flatware designed for single use and used to serve and transport food

Styrofoam - High-density polyethylene foam that is commonly used as a packing material.

True waste – Materials that cannot currently be diverted. These materials are known as “true waste” because there are currently no recycling markets for these materials, and the materials are not compostable at local composting facilities, or the materials are not readily reused or fit for donation. Common materials include candy wrappers, chip bags, soiled textiles unfit for donation or recycling, polyvinyl chloride items such as gift cards, and non-recyclable mixed material items without current recycling markets. True waste includes non-recoverable glass.

Yard debris – Organic plant material, which can be composted in a yard debris stream.