



# University of Washington Waste Characterization Study

Prepared for University of Washington, Building Services Department  
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## Organization of the Report

This report presents results of a study of disposed materials conducted at the University of Washington's campus in Seattle in 2018. This study obtained detailed data on the quantities and composition of materials placed in garbage, recycling, and compost receptacles across the campus. This report is organized into the major sections listed below.

- ▶ **Study Background and Purpose**, beginning on page 2, provides a historical context for this study and a brief description of the key objectives.
- ▶ **Summary of Study Methods**, beginning on page 2, explains the methodology used to design and implement the study, including definitions of the generator groups the study examined; procedures used to schedule, collect, and sort samples; and analytical and statistical methods.
- ▶ **Campus Overview**, beginning on page 12, shows the distribution of waste tonnages among the 11 generator groups and comparisons of the results to previous study data.
- ▶ **Campus-Wide Results**, beginning on page 18, presents key findings about waste generated at the University. Waste composition results and recycling program opportunities are discussed. The subsequent sections cover the 11 generator groups as follows:
  - Academic Buildings
  - Administrative Buildings
  - Arts and Design Buildings
  - Athletic and Recreation Facilities
  - Campus Laboratories
  - Health Sciences
  - Maintenance Buildings
  - Medical Center
  - Residence Halls
  - Outdoor Litter Receptacles: Bigbelly Stations
  - Outdoor Litter Receptacles: Smart Cans
- ▶ **Appendices** follow the main body of the report, beginning on page 167. These documents provide supplemental results, including definitions of material types and recoverability categories included in the study, detailed composition results for each generator group, and copies of field forms used during the study.

## Study Background and Purpose

The objective of the 2018 waste characterization study was to provide statistically valid composition estimates of garbage, recycling, and compostable material generated on the University of Washington's (UW) campus in Seattle, Washington. Data from this study will be used to evaluate current diversion programs, identify realistic and achievable program goals, and support the design of effective diversion programs to achieve set goals. UW previously conducted waste stream analyses in 1989 and 2003; the 2018 study follows the same basic methodology as the previous studies, but it has expanded the scope of the study to also include materials collected through recycling and compost streams as well as disposed waste.

## Summary of Study Methods

This chapter summarizes the methodology used to conduct the study. Generator groups are defined in the first section, followed by an explanation of how the samples were allocated to those generator groups. Next, the chapter describes the sampling field procedures and materials studied. The last section of the chapter explains the data analysis and statistical methods used in the study.

### STREAMS AND GENERATOR GROUPS DEFINED

The 2018 study examined three distinct material streams on UW's campus. For this study, material streams refer to where materials are placed by those disposing of material for collection and end-of-life management. The streams included in this study are:

- ▶ Garbage
- ▶ Recycling
- ▶ Compost

Source-separated fiber, referred to as combined fiber, was not sampled and sorted as part of this study. However, combined fiber tonnages as reported by UW are included in the analysis and calculations of campus-wide and generator-group-specific recovery rates. All other material streams collected by other means (such as locked containers or separate hauling services for distinct, source-separated streams such as scrap metal or electronic waste) were excluded from sampling and the associated tons are not included in this study.

The study covered 11 distinct generator groups based on the source of the garbage, recycling, or compost material.

1. **Academic Buildings:** Material from academic buildings, typically containing classrooms, libraries, and academic offices.
2. **Administrative Buildings:** Material from administrative buildings, typically containing offices, such as UW Tower and Gerberding Hall.
3. **Arts and Design Buildings:** Material from University galleries, theaters, and buildings occupied by fine arts, performance arts, design, and architectural programs.
4. **Athletic and Recreation Facilities:** Material from indoor and outdoor athletic and recreation complexes such as the Husky Stadium and the Conibear Shellhouse.
5. **Campus Laboratories:** Material from buildings that are primarily science and engineering laboratories. This generator group excludes garbage and recycling collected from laboratories in the Magnuson Health Sciences Center or UW Medical Center, which have their own generator groups as noted below.

6. **Health Sciences:** Material from the Magnuson Health Sciences Center, containing a combination of laboratories, offices, and classrooms.
7. **Maintenance Buildings:** Material from buildings with maintenance and campus operations such as the power plant, UW Police Department, and the Plant Services Building.
8. **Medical Center:** Material from UW Medical Center and a few associated buildings, such as the Roosevelt Clinic.
9. **Residence Halls:** Material from UW Housing & Food Services, including student housing, apartments, and associated food service facilities.
10. **Outdoor Litter Receptacles: Bigbelly Stations:** Material from public-use Bigbelly Stations throughout campus. Bigbelly Stations include compartments for garbage, recycling, and compost.
11. **Outdoor Litter Receptacles: Smart Cans:** Material from public-use bins located throughout campus. These bins have compartments for garbage and recycling but not for compost.

The table below compares generator groups used in the current and previous studies. Generator groups remain largely comparable to those used in previous studies, with several key changes:

- ▶ Buildings are consistently organized by primary use (e.g., academic, laboratory, administration) instead of by geography (e.g., upper, lower, west campus).
- ▶ The outdoor litter receptacle generator group is now Bigbelly Stations. In previous studies, this generator group was made up of cement garbage cans.
- ▶ The food services generator group was removed for the 2018 study. Food service locations are included in every generator group in the current study.

Table 1. Generator Groups Used in the 1989, 2003, and 2018 Characterization Studies

| 1989 Generator Groups                     | 2003 Generator Groups   | 2018 Generator Groups                            |
|---|---|--|
| Upper Campus Classrooms                   | Upper Campus Classrooms   | Academic Buildings                               |
| Lower Campus Laboratories                 | Lower Campus Laboratories   | Campus Laboratories                              |
| Residence Halls                           | Residence Halls   | Residence Halls                                  |
| Food Services                             | Food Services   | <i>(included in other generator groups)</i>      |
| Medical Center                            | Medical Center  | Medical Center                                   |
| Health Sciences                           | Health Sciences   | Health Sciences                                  |
| Other Service Buildings<br>(UW-collected) | Art Buildings   | Arts and Design Buildings                        |
| Mixed Generators<br>(Bayside-collected)   | ICA and IMA Facilities  | Athletic and Recreation Facilities               |
|   | Maintenance Buildings   | Maintenance Buildings                            |
|   | West Campus Buildings   | Administrative Buildings                         |
|   | Outdoor Litter Receptacles:<br>Smart Cans (with recycling option) | Outdoor Litter Receptacles:<br>Smart Cans        |
|   | Outdoor Litter Receptacles:<br>Cement Garbage Cans                | Outdoor Litter Receptacles:<br>Bigbelly Stations |

## ALLOCATION OF SAMPLES TO GENERATOR GROUPS AND STREAMS

UW provided a list of all waste collection containers on campus, including container types, sizes, locations, and collection schedules. The containers were assigned to one of the 11 generator groups based on the source of their waste (see *Appendix C. Campus Locations Included in Study* for a complete list of buildings or facilities included in this study and a description of their containers). Containers that receive material from multiple generator groups were excluded from the study.

Cascadia allocated 229 samples of garbage, 120 samples of recycling, and 120 samples of compost to the 11 generator groups defined for this study. All generator groups were allocated at least 12 garbage samples (with most having a sample allocation of 20-25 samples), 10 recycling samples, and 10 compost samples. Remaining samples were allocated to generator groups with the highest annual generated tons. Originally, Cascadia allocated 240 samples of garbage, with at least 20 samples per generator group, but the targets for outdoor litter receptacles (Smart Cans and Bigbelly Stations) were reduced due to lower-than-anticipated material generation from these locations.

Table 2 outlines the planned and actual numbers of samples collected by generator group for this study.

**Table 2. Planned and Actual Sample Allocation**

|                                    | Garbage         |                 |            | Recycling  |            | Compost    |            |
|------------------------------------|-----------------|-----------------|------------|------------|------------|------------|------------|
|                                    | Original Target | Adjusted Target | Captured   | Target     | Captured   | Target     | Captured   |
| Academic Buildings                 | 24              | 25              | 25         | 15         | 15         | 14         | 14         |
| Administrative Buildings           | 20              | 20              | 20         | 10         | 10         | 10         | 10         |
| Arts and Design Buildings          | 20              | 20              | 18         | 10         | 10         | 10         | 10         |
| Athletic and Recreation Facilities | 20              | 20              | 20         | 10         | 11         | 10         | 10         |
| Campus Laboratories                | 24              | 25              | 25         | 10         | 10         | 14         | 14         |
| Health Sciences                    | 24              | 25              | 29         | 10         | 11         | 14         | 14         |
| Maintenance Buildings              | 20              | 20              | 20         | 10         | 10         | 10         | 10         |
| Medical Center                     | 24              | 25              | 25         | 10         | 10         | 14         | 14         |
| Residence Halls                    | 24              | 25              | 25         | 15         | 15         | 14         | 14         |
| Bigbelly Stations                  | 20              | 12              | 13         | 10         | 10         | 10         | 10         |
| Smart Cans                         | 20              | 12              | 13         | 10         | 10         | --         | --         |
| <b>TOTAL</b>                       | <b>240</b>      | <b>229</b>      | <b>233</b> | <b>120</b> | <b>122</b> | <b>120</b> | <b>120</b> |

## SAMPLING AND SORTING PROCEDURES

All sampling and sorting activities took place during January and February 2018. During the study, the sampling procedures varied by stream material. Garbage samples were collected and sorted by a team at Seattle Public Utilities’ North Transfer Station. Recycling and compost samples were collected and sorted by a team on UW’s campus, except for recycling collected from a chute-based system into compactors at residence halls was not sorted on campus. To avoid potential overhead hazards, this material was sampled and sorted at Waste Management’s Eastmont Transfer Station.

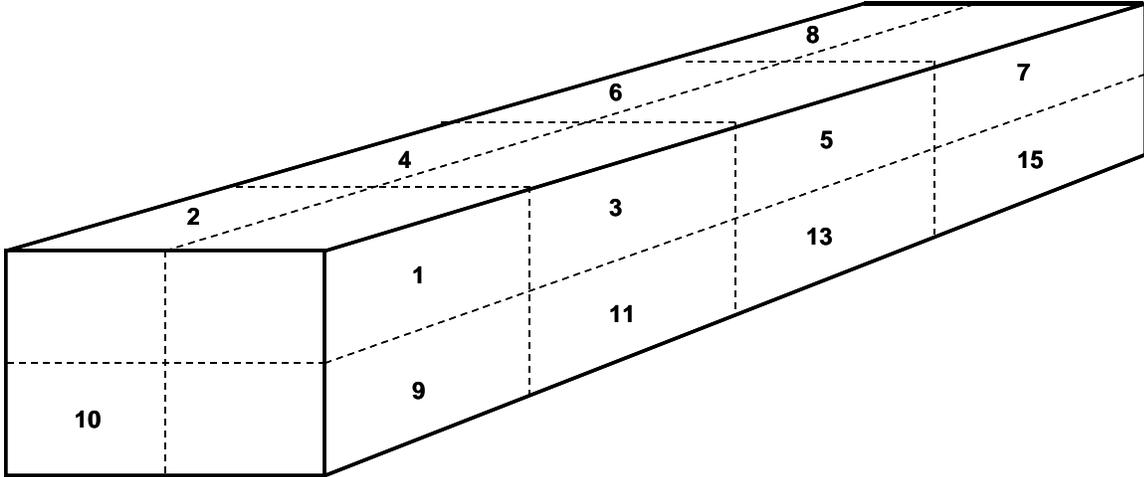
The sampling procedures for each stream are described in detail in the sections below, followed by a description of the sorting procedures used for this study.

### Garbage Sampling

Garbage sampling took place at North Transfer Station, the typical disposal site for garbage from UW. Cascadia worked with Waste Management and UW to designate bins for sampling during each day of the study. For roll-offs and compactors, Cascadia identified specific bins for Waste Management to collect each day associated with specific generator groups. For two-yard dumpsters, Cascadia designed special collection routes to consolidate material from the same generator group into a single load. UW collected garbage from the special routes for each day of the study.

Cascadia staff met UW and Waste Management vehicles arriving at North Transfer Station with the designated loads for the study. After the vehicles tipped their loads, Cascadia’s field crew supervisor superimposed an imaginary 16-cell grid on the load, illustrated in Figure 1, and instructed the transfer station’s loader operator to extract material from a randomly pre-selected portion. Up to six samples were collected from a selected load and placed on a tarp for sorting. The target weight for each garbage sample was 200 pounds.

Figure 1. 16-cell Grid Applied to a Tipped Load



## Recycling and Compost Sampling

Cascadia's field team collected recycling and compost samples directly from containers on UW's campus. A sample of recycling or compost consisted of all material in the bin or 125 pounds, whichever was less. In cases where material in a container exceeded 125 pounds, a random portion of the material was selected as described above for garbage sampling using an imaginary 16-cell grid.

For outdoor litter receptacles, contents from multiple receptacles was combined into a single sample for each distinct material stream (recycling or compost). Cascadia collected up to 125 pounds of material from up to 6 Bigbelly Stations or 10 Smart Cans for each outdoor litter receptacle sample. After samples were sorted and weighed (using procedures described in the following sections), Cascadia's team placed material back into the container for regular campus services to collect.

## Sorting Procedures

Waste, recycling, and organics were hand-sorted into the 88 material types defined for this study, as described in *Appendix A. Material List and Definitions*. Due to safety considerations associated with handling potentially biohazardous materials and sharps, all waste for disposal collected from UW Medical Center and health sciences facilities was characterized using a visual method. The sections below describe both the hand-sort and visual characterization methods.

### Hand-sort procedures

Cascadia's process for hand-sorting waste includes the following steps:

- ▶ A member of the field crew photographs the sample using a digital camera. A placard with the sample's unique identifying number, generator group, and date of sample collection is positioned so that it is visible in each photo.
- ▶ The field crew sorts the waste into the material types defined for the study, storing separated materials in plastic laundry baskets. The field crew manager monitors material in the baskets as they accumulate, rejecting and re-sorting any material that is improperly separated.
- ▶ Finally, the field crew manager weighs the sample using a pre-calibrated scale, recording each material weight to Cascadia's custom cloud-based database using a handheld tablet.

This process is illustrated in Figure 2.

Figure 2. Overview of Hand-sort Process



### Visual Characterization

Due to safety considerations associated with handling potentially biohazardous materials and sharps, the garbage samples from UW Medical Center and health sciences facilities were visually characterized. The visual characterization method is described below:

- ▶ First, a field crew member measures the length, width, and height of the load while it is still in the vehicle or immediately after the load is tipped to calculate a sample volume. The crew member then records the dimensions for that sample.
- ▶ Next, the sampling crew places a placard with information that identifies the sample on the dumped load so that it is readily visible. The crew member photographs the sample from multiple angles.
- ▶ The sampling crew walks around the sample, estimating the volumetric percentage of each material class (such as paper) and records it on the form. Next, the sampling crew considers each material class separately and estimates the percentage of each class that is made up of each material type (for example, what percentage of paper in the sample is made up of newspaper).
- ▶ The sampling crew ensures that the volumetric percentage estimates for the material classes add up to 100 percent. The percentage estimates for the material types within each material class must also total 100 percent.
- ▶ Cascadia's analysts convert the volume estimates to weight estimates using accepted density conversion factors that have been used for waste characterization studies throughout the United States.

## MATERIAL TYPES, CLASSES, AND CATEGORIES DEFINED

The composition results in this report are presented in several sets. Materials were organized into 88 **material types**—the finest level of detail for sorting collected samples. The list of material types included in the study typically reflects material likely to be generated by City of Seattle residents and largely mirrors the material list used for the City of Seattle’s waste composition studies. In general, the list of material types is designed to reflect the level of detail desired for the study audience and to be consistent and reasonably comparable to the list used in previous studies. Key additions to the 2018 material types list from the 2003-2004 study were compostable bags and non-compostable food service paper, material types not commonly found in the waste stream at the time of the previous study.

Every material type falls into one of eight broad material classes: **paper, plastic, glass, metal, organics, other materials, CDL wastes** (construction, demolition, and landclearing wastes), and **regulated materials**. All materials within a **material type** share the same **recoverability category**—the correct disposal method. Recoverability categories are **mixed recyclable, compostable, separated recyclable, recoverable construction and demolition (C&D), and non-recoverable** materials. Table 3 shows the material classes, individual material types, and the assigned recoverability category for each material type used for this study.

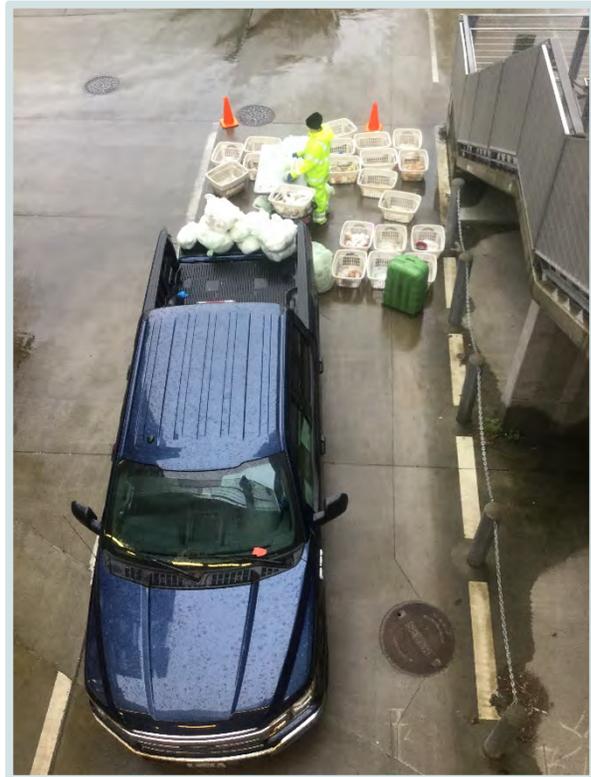


Table 3. Material Classes, Material Types, and Recoverability Categories

| Paper   | Metals   | CDL Wastes  |
|---|--|---|
| <ul style="list-style-type: none"> <li><span style="color: #4F81BD;">■</span> Newspaper</li> <li><span style="color: #4F81BD;">■</span> Plain OCC/Kraft Paper</li> <li><span style="color: #92D050;">■</span> Waxed OCC/Kraft Paper</li> <li><span style="color: #4F81BD;">■</span> High-grade Paper</li> <li><span style="color: #4F81BD;">■</span> Mixed Low-grade Paper</li> <li><span style="color: #4F81BD;">■</span> Non-compostable Single-use Food Service Paper</li> <li><span style="color: #4F81BD;">■</span> Polycoated/Aseptic Packaging</li> <li><span style="color: #92D050;">■</span> Compostable/Soiled Paper</li> <li><span style="color: #FFC000;">■</span> Hardcover Books</li> <li><span style="color: #666666;">■</span> Non-recoverable &amp; Composite Paper</li> </ul>   | <ul style="list-style-type: none"> <li><span style="color: #4F81BD;">■</span> Aluminum Cans</li> <li><span style="color: #4F81BD;">■</span> Other Single-use Aluminum</li> <li><span style="color: #4F81BD;">■</span> Other Nonferrous</li> <li><span style="color: #4F81BD;">■</span> Tin Food Cans</li> <li><span style="color: #666666;">■</span> Empty Aerosol Cans</li> <li><span style="color: #4F81BD;">■</span> Other Ferrous</li> <li><span style="color: #FFC000;">■</span> Oil Filters</li> <li><span style="color: #666666;">■</span> Non-recoverable &amp; Composite Metal</li> </ul>   | <ul style="list-style-type: none"> <li><span style="color: #FFC000;">■</span> Dimension Lumber</li> <li><span style="color: #666666;">■</span> Clean Engineered Wood</li> <li><span style="color: #666666;">■</span> Treated Wood</li> <li><span style="color: #666666;">■</span> Contaminated wood</li> <li><span style="color: #FFC000;">■</span> New Gypsum Scrap</li> <li><span style="color: #666666;">■</span> Demo Gypsum Scrap</li> <li><span style="color: #666666;">■</span> Fiberglass Insulation</li> <li><span style="color: #FFC000;">■</span> Asphalt/Bricks/Concrete</li> <li><span style="color: #666666;">■</span> Rock</li> <li><span style="color: #FFC000;">■</span> Asphaltic Roofing</li> <li><span style="color: #666666;">■</span> Carpet &amp; Padding</li> <li><span style="color: #666666;">■</span> Construction Debris</li> </ul> |
| <ul style="list-style-type: none"> <li><span style="color: #4F81BD;">■</span> PET Bottles &amp; Containers</li> <li><span style="color: #4F81BD;">■</span> HDPE Natural Bottles &amp; Tubs</li> <li><span style="color: #4F81BD;">■</span> HDPE Colored Bottles &amp; Tubs</li> <li><span style="color: #92D050;">■</span> Compostable Single-use Food Service Plastics</li> <li><span style="color: #4F81BD;">■</span> Rigid Containers</li> <li><span style="color: #FFC000;">■</span> Expanded Polystyrene</li> <li><span style="color: #666666;">■</span> Non-recoverable Rigid Packaging</li> <li><span style="color: #4F81BD;">■</span> Bagged Clean Shopping/Dry Cleaner Bags</li> <li><span style="color: #FFC000;">■</span> Loose Clean Shopping/Dry Cleaner Bags</li> <li><span style="color: #92D050;">■</span> Other Clean Polyethylene Film</li> <li><span style="color: #92D050;">■</span> Compostable Bags</li> <li><span style="color: #666666;">■</span> Latex/Nitrile Gloves</li> <li><span style="color: #666666;">■</span> Other Film</li> <li><span style="color: #666666;">■</span> Bed Pans/Basins/Trays</li> <li><span style="color: #666666;">■</span> I.V. Bags &amp; Tubing</li> <li><span style="color: #666666;">■</span> Respiratory Hoses</li> <li><span style="color: #666666;">■</span> Draping/Sterile Wrap/Gowns</li> <li><span style="color: #666666;">■</span> Other Plastic Products</li> <li><span style="color: #666666;">■</span> Non-recoverable &amp; Composite Plastic</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: #92D050;">■</span> Leaves/Grass/Prunings</li> <li><span style="color: #92D050;">■</span> Other Untreated wood</li> <li><span style="color: #92D050;">■</span> Food</li> <li><span style="color: #666666;">■</span> Non-recoverable &amp; Composite Organics</li> <li><span style="color: #FFC000;">■</span> Textiles</li> </ul>   | <ul style="list-style-type: none"> <li><span style="color: #666666;">■</span> Latex Paints</li> <li><span style="color: #666666;">■</span> Oil-Based Paints/Solvents</li> <li><span style="color: #666666;">■</span> Adhesives/Glues</li> <li><span style="color: #666666;">■</span> Cleaners</li> <li><span style="color: #666666;">■</span> Pesticides/Herbicides</li> <li><span style="color: #FFC000;">■</span> Batteries</li> <li><span style="color: #666666;">■</span> Vehicle Fluids</li> <li><span style="color: #666666;">■</span> Asbestos</li> <li><span style="color: #666666;">■</span> Explosives</li> <li><span style="color: #666666;">■</span> Clear &amp; Orange Bag Medical Waste</li> <li><span style="color: #666666;">■</span> Red Bag Medical Waste</li> <li><span style="color: #666666;">■</span> Other Chemical Waste</li> </ul>     |
| <ul style="list-style-type: none"> <li><span style="color: #4F81BD;">■</span> Beverage Glass</li> <li><span style="color: #4F81BD;">■</span> Container Glass</li> <li><span style="color: #FFC000;">■</span> Light Bulbs &amp; Tubes</li> <li><span style="color: #666666;">■</span> Lab Glass</li> <li><span style="color: #666666;">■</span> Other Glass</li> </ul>   | <ul style="list-style-type: none"> <li><span style="color: #FFC000;">■</span> Mixed Textiles</li> <li><span style="color: #666666;">■</span> Leather</li> <li><span style="color: #666666;">■</span> Disposable Diapers</li> <li><span style="color: #666666;">■</span> Animal Waste</li> <li><span style="color: #666666;">■</span> Rubber Products</li> <li><span style="color: #FFC000;">■</span> Tires</li> <li><span style="color: #666666;">■</span> Ash</li> <li><span style="color: #666666;">■</span> Furniture</li> <li><span style="color: #FFC000;">■</span> Mattresses</li> <li><span style="color: #FFC000;">■</span> Small Appliances</li> <li><span style="color: #FFC000;">■</span> Cell Phones &amp; Tablets</li> <li><span style="color: #FFC000;">■</span> CRT Monitors/Televisions</li> <li><span style="color: #FFC000;">■</span> Non-CRT Monitors/Televisions</li> <li><span style="color: #FFC000;">■</span> Other Electronics</li> <li><span style="color: #666666;">■</span> Ceramics/Porcelain</li> <li><span style="color: #666666;">■</span> Fines &amp; Miscellaneous</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: #666666;">■</span> Regulated Wastes</li> </ul>   |

- Mixed Recyclable
- Compostable
- Separated Recyclable
- Recoverable C&D
- Non-recoverable

## DATA ANALYSIS AND INTERPRETING RESULTS

### Data Analysis

All sampling data were entered into a customized database for the project. Composition estimates (the percentage by weight of each material type included in the study) for UW's garbage, recycling, and compost streams by generator group were calculated from this database. Cascadia also estimated the annual tonnages of material generated by the campus. This calculation is based on a combination of data gathered during the sampling period and tonnages provided by the University and the University's waste collection vendor, Waste Management. Cascadia based the analysis for this study on tonnages reported from October 2016 through September 2017. These tonnages are periodically referred to as annual tons for the purposes of this report.

The composition estimates were applied to the annual tonnages to produce material-specific estimates for UW's overall garbage, recycling, and compost streams and for each generator group (e.g., tons of newspaper disposed by academic buildings during the reporting period, October 2016 through September 2017).

Cascadia also combined data from the recycling and compost streams sampling with disposal data to create a picture of the total generation and the capture rate for key materials (for example, what percentage of the food generated on campus ends up in the compost bin). The calculations used for the analyses are described in detail in *Appendix D. Analytical Procedures*.

### Interpreting Results

The following terms are used to describe findings for this study:

- ▶ **Material composition** describes the individual components of the stream, typically as a percentage by weight unless otherwise noticed.
- ▶ **Generation** describes the total amount of material disposed by the generator group(s) for all streams included in the analysis. For this study, generation refers to all material disposed through garbage, recycling, compost, and combined fiber streams. As used in this report, generation does not include material collected through locked containers or other source-separated special streams (such as separate electronic waste collection for recycling) that were excluded from the study and the analysis.
- ▶ **Contamination** refers to material placed in a stream that is not appropriate for its recovery and that would be removed in the processing stage of recycling or composting. For example, food waste and garbage in recycling bins is a contaminant. Contamination is also sometimes used to refer to recoverable material (recyclable or compostable material) placed in the garbage.
- ▶ **Recoverable** materials are materials that are accepted in either the recycling, compost, or combined fiber streams.
- ▶ **Recovery rate** describes the percentage of generated material that is placed in non-landfill streams (recycling, compost, and combined fiber). This rate considers only material collected in garbage, recycling, compost, and combined fiber streams, not the full set of divertible materials captured and diverted from campus—the campus-wide diversion rate is not included in this study. In addition, the recovery rate describes the amount of material placed in the respective recovery streams and does not account for potential contamination.

- ▶ **Capture rates** describe the percentage of material that is placed in the appropriate stream for recovery. For example, a capture rate of 70 percent for beverage cans means that 70 percent of the cans are placed in single-stream recycling, while the remaining 30 percent are disposed of in other streams (garbage or compost) from which they are not recovered.

Findings for overall campus waste generation are first presented by generator group, including tonnages, recovery rates, and compositions by material stream (garbage, recycling, combined fiber, and compost). This summary is followed by a comparison of garbage disposal rates to the results of past studies in 1989 and 2003.

Next, the composition results of Cascadia's analyses are presented as follows for the campus overall and by each generator group:

- ▶ Findings for all material streams (garbage, recycling, and compost) combined.
- ▶ Findings for garbage, recycling, and compost streams separately, presented as three distinct sections in each generator-group-specific section.
- ▶ Opportunities to recover additional material, including capture rates for selected groupings of material.

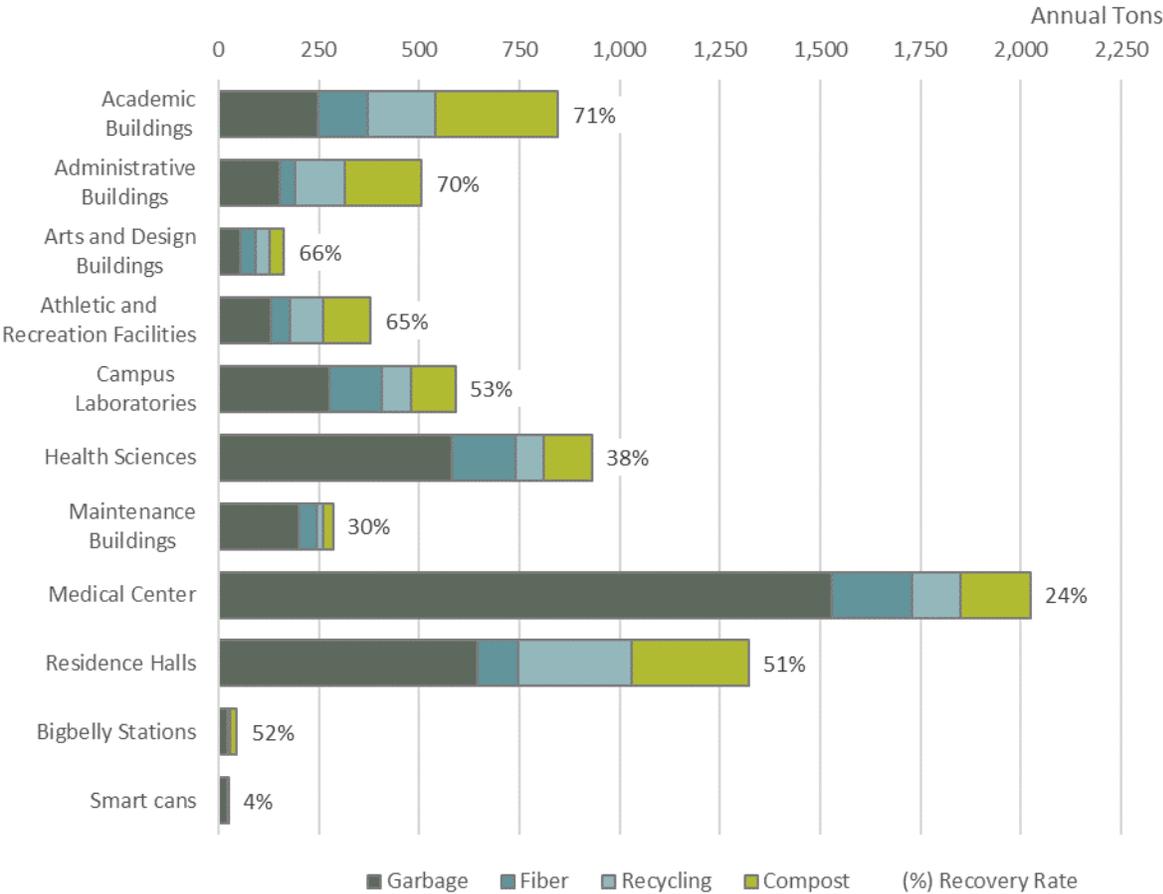


# Campus Overview

## OVERVIEW OF CAMPUS-WIDE WASTE

The University of Washington’s campus in Seattle disposed of 7,116 tons of material annually. Figure 3 below shows campus-wide waste generation and recovery rates by generator group and by material stream. The length of the bars shows the waste generation of each generator group by stream, while the percentage listed for each reflects the generator group’s recovery rate.

Figure 3. Waste Generation and Recovery by Generator Group



Key findings for all generator groups included in the study are below. More detailed findings for each generator group are in subsequent chapters of this report.

- ▶ The three largest generators of material on campus are the medical center (2,023 tons), residence halls (1,322 tons), and health sciences (931 tons).
- ▶ The generator groups that achieved the highest recovery rates are academic buildings, administrative buildings, arts and design buildings, and athletics and recreation facilities, each achieving a recovery rate of 65 percent or greater.
- ▶ Recycling contamination for the campus overall is 26 percent. The generator groups with the highest rates of recycling contamination are athletic and recreation facilities (40% contamination), Bigbelly Stations outdoor litter receptacles (38% contamination rate), and health sciences (34% contamination). Administrative buildings have the lowest rate of recycling contamination (13% contamination).
- ▶ Compost contamination for the campus overall is 8 percent. The generator groups with the highest rates of compost contamination are administrative buildings (17% contamination in compost) and maintenance buildings (14%). The generator groups with the lowest compost contamination rates are residence halls (4% contamination), campus laboratories (5%), and health sciences facilities (5%).
- ▶ For all generator groups, *food* and *compostable/soiled paper* are among the top three material types generated by weight. Some generator groups produced material types that were more distinct to their generator group than the others:
  - Health sciences facilities have *red bag medical waste* as the top material type generated by weight (23% of material disposed to garbage, recycling, and compost by health sciences facilities).
  - Maintenance buildings have *carpet & padding* as one of the top material types generated (12%).
- ▶ Across all generator groups, *food*, *compostable/soiled paper*, and *recyclable paper & combined fiber* are the material types with the largest quantities (by weight) remaining for recovery. Overall, the campus is capturing less than half (39%) of its *compostable/soiled paper* through compost, with the remaining material going to garbage or recycling where it is not recoverable. Campus-wide capture rates for *recyclable paper & combined fiber* (64%) and *food* (52%) are higher but still have room for improvement.

The two figures below illustrate the location of collection containers included in the study, not including outdoor litter receptacles, which are shown in Figure 5.

Figure 4. 2018 Garbage, Recycling, and Compost Collection Locations: Campus-wide

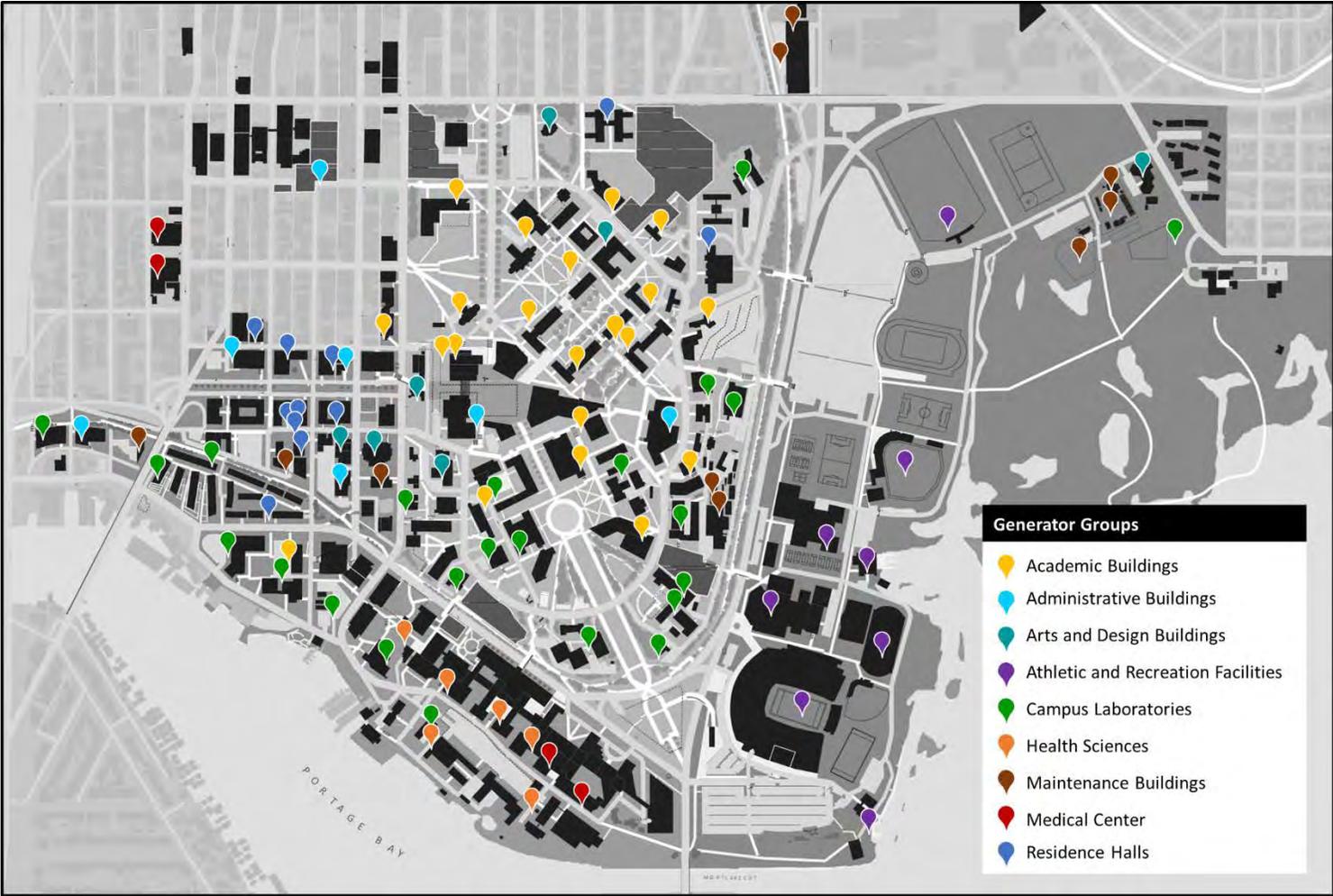


Figure 5. 2018 Garbage, Recycling, and Compost Collection Locations: Outdoor Litter Receptacles



## GARBAGE DISPOSAL IN 2018 COMPARED TO 1989 AND 2003

Table 4 below shows annual garbage quantities, campus population (staff and students), and building square footage for 2018 and the years for which there are past characterization studies (2003 and 1989). Overall, garbage disposal on campus has decreased even as the population and building square footage on campus have grown. In 2018, the annual quantity in tons of garbage disposed was 55 percent less than in 2003, while campus population increased by 50 percent over the same period.

**Table 4. Garbage Disposal Rates: 1989, 2003, and 2018 Studies**

|  | 1989   | 2003   | % change<br>from 1989 | 2018   | % change<br>from 2003 |
|--|--------|--------|-----------------------|--------|-----------------------|
| Garbage (tons/yr.)                         | 6,507  | 8,551  | 31%                   | 3,861  | -55%                  |
| Population<br>(students and staff)         | 46,166 | 59,516 | 29%                   | 89,548 | 50%                   |
| lbs./person/yr.                            | 279    | 287    | 3%                    | 86     | -70%                  |
| Building Square Footage<br>(1,000 sq. ft.) | 6,386  | 8,009  | 25%                   | 11,720 | 46%                   |
| lbs./1,000 sq. ft./yr.                     | 2,016  | 2,135  | 6%                    | 659    | -69%                  |

The table below provides additional detail on how total garbage disposal (in annual tons) has changed from 2003 to 2018 by generator group. As shown, total garbage disposal for every generator group has decreased since the prior study. Residence halls, the medical center, and health sciences remain the largest generators of garbage.

**Table 5. Annual Garbage Tons by Generator Group: 2003 and 2018**

|                                    | 2003         |             | 2018         |             |
|------------------------------------|--------------|-------------|--------------|-------------|
| Academic Buildings                 | 456          | 5%          | 247          | 6%          |
| Administrative Buildings           | 364          | 4%          | 152          | 4%          |
| Arts and Design Buildings          | 269          | 3%          | 55           | 1%          |
| Athletic and Recreation Facilities | 619          | 7%          | 132          | 3%          |
| Campus Laboratories                | 448          | 5%          | 275          | 7%          |
| Health Sciences                    | 1,148        | 13%         | 581          | 15%         |
| Maintenance Buildings              | 770          | 9%          | 201          | 5%          |
| Medical Center                     | 1,688        | 20%         | 1,528        | 40%         |
| Residence Halls                    | 2,566        | 30%         | 645          | 17%         |
| Outdoor Litter Receptacles         | 223          | 3%          | 44           | 1%          |
| <b>Campus Overall</b>              | <b>8,551</b> | <b>100%</b> | <b>3,861</b> | <b>100%</b> |

Figure 6 presents the campus-wide per-capita disposal rates for garbage by material class for the current study and past studies in 2003 and 1989. As shown, per-capita disposal rates for all material classes have decreased since the 2003 study.

Figure 6. Per-capita Annual Disposal by Material Class: 1989, 2003, and 2018 Studies

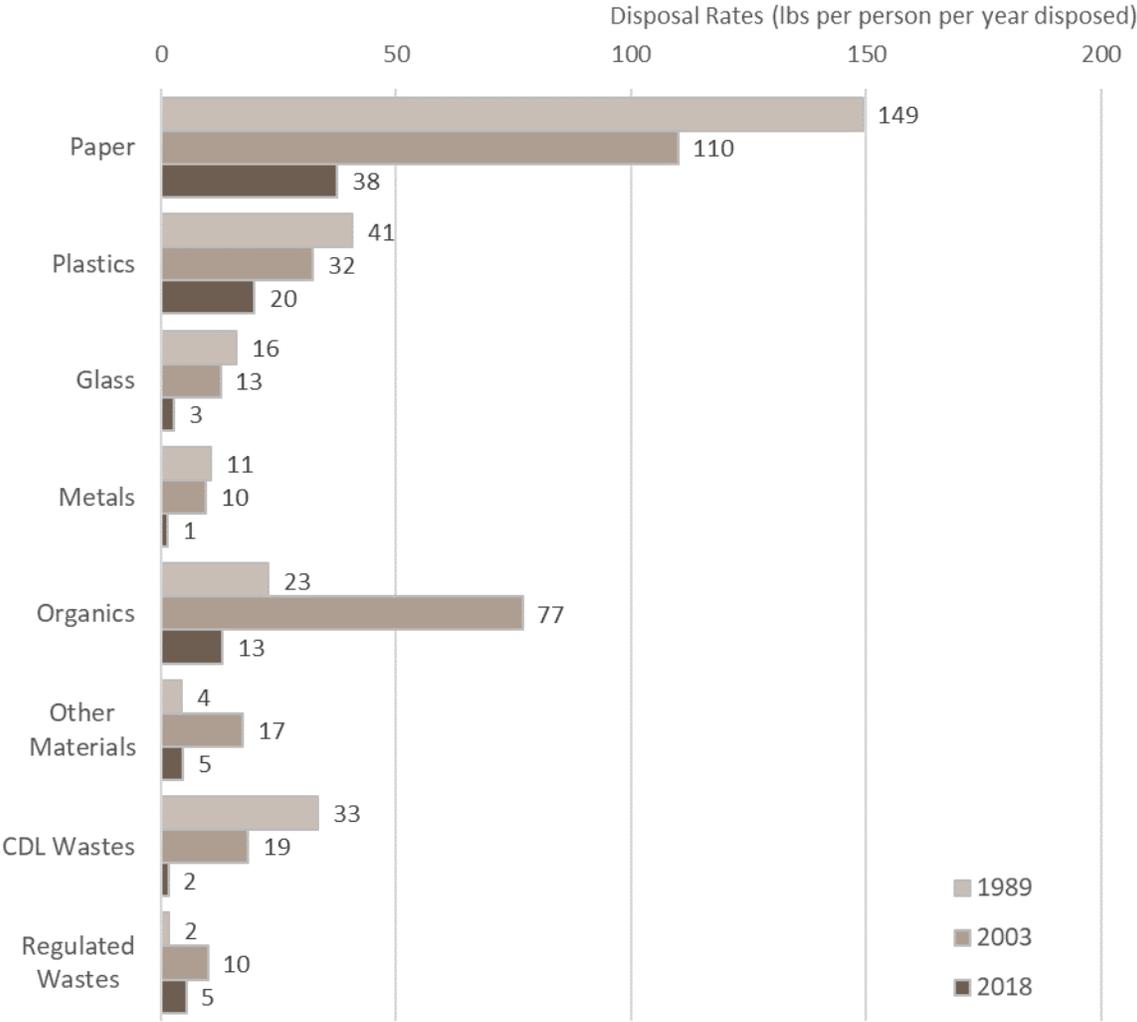


Figure 7 compares garbage disposal rates (normalized to building occupancy and building area) for the three generator groups that produced the most garbage by weight: health sciences, the medical center, and residence halls.

Figure 7. Comparison of Garbage Disposal Rates (2003 and 2018) by Generator Group<sup>1</sup>

|                                   | 2003         | 2018         | % diff      |
|-----------------------------------|--------------|--------------|-------------|
| <b>Health Sciences (tons/yr.)</b> | <b>1,148</b> | <b>581</b>   | <b>-49%</b> |
| Building Area (1,000 sq. ft.)     | 1,238        | 1,915        | 55%         |
| lbs./1,000 sq. ft.                | 1,855        | 607          | -67%        |
| <b>Medical Center (tons/yr.)</b>  | <b>1,688</b> | <b>1,528</b> | <b>-9%</b>  |
| Patients                          | 330,298      | 338,399      | 2%          |
| lbs./100 patients/yr.             | 1,022        | 903          | -12%        |
| Building Area (1,000 sq. ft.)     | 436          | 2,125        | 388%        |
| lbs./1,000 sq. ft.                | 7,744        | 1,438        | -81%        |
| <b>Residence Halls (tons/yr.)</b> | <b>2,566</b> | <b>645</b>   | <b>-75%</b> |
| Student Occupancy                 | 4,934        | 8,672        | 76%         |
| lbs./student/yr.                  | 1,040        | 149          | -86%        |
| Building Area (1,000 sq. ft.)     | 8,009        | 11,720       | 46%         |
| lbs./1,000 sq. ft.                | 641          | 110          | -83%        |

The study was not designed to identify the causes for changes to disposal trends on campus, but potential factors that can contribute to reduction of garbage disposal rates include:

- ▶ Increased diversion of campus waste to compost streams (a collection option that was not available on campus in 1989 and 2003).
- ▶ Increased use of campus recycling programs (and expanded recycling programs that can capture more types of material).
- ▶ Increased diversion of campus C&D material to designated C&D management streams.
- ▶ Reduced paper generation overall due to increased use of electronic tools and resources.
- ▶ Overall light-weighting of plastic products.
- ▶ Increased use—and capture—of recyclable or compostable packaging materials.
- ▶ Overall reduction in waste generation by campus population.

<sup>1</sup> Building occupancy data for health sciences buildings was not available for this analysis, so only garbage disposal normalized to building area is presented for this generator group.

## COMPOSITION RESULTS: OVERALL

This section describes the quantities and composition of material disposed through the garbage, recycling, and compost streams campus-wide at UW. The campus disposed of 7,116 tons of material annually and achieved a 46 percent recovery rate.

Figure 8 shows the composition of material generated campus-wide by stream.

Compared to 2003, annual garbage disposal (in tons) has decreased by 55 percent, from 8,551 tons to 3,861 tons. Over the same period (from 2003 to 2018), the population of the campus has increased by 50 percent.

Figure 8. Annual Tons by Stream: Campus-wide Results

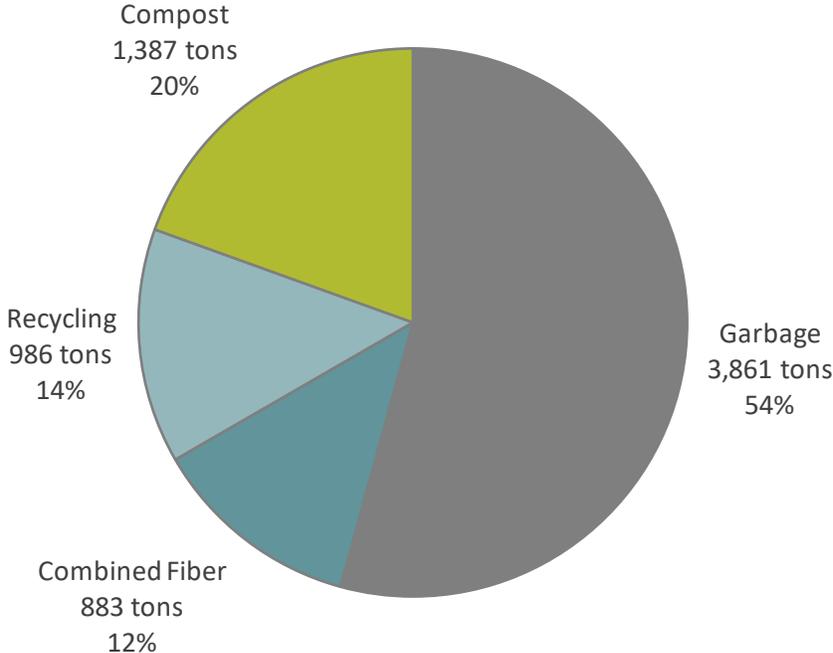
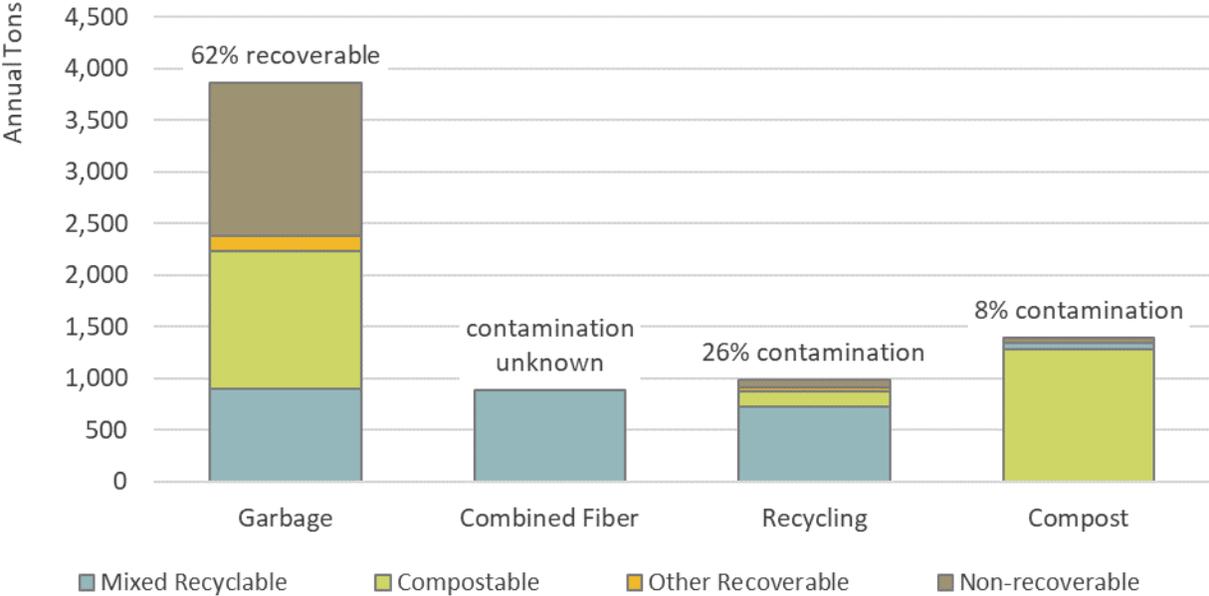


Figure 9 presents the composition and quantities of each stream by recoverability category. As shown, more than three-fifths (62%) of garbage is recoverable, much of which is compostable material. More than one-quarter (26%) of the recycling stream collected campus-wide is material that cannot be processed and recovered through recycling programs, and 8 percent of compost collected is contaminant material.

Figure 9. Recoverability and Contamination by Stream: Campus-wide Results



The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.

Figure 10 shows the composition of campus-wide generation by material class. The data include all material disposed in the garbage, recycling, combined fiber, and compost streams. As shown, campus-wide generation is primarily paper, accounting for 51 percent of disposed material. Other large material classes generated campus-wide are compostable organics (19%) and plastics (17%), each representing approximately one-fifth of the total generation by weight.

Figure 10. Annual Tons by Material Class, All Streams: Campus-wide Results

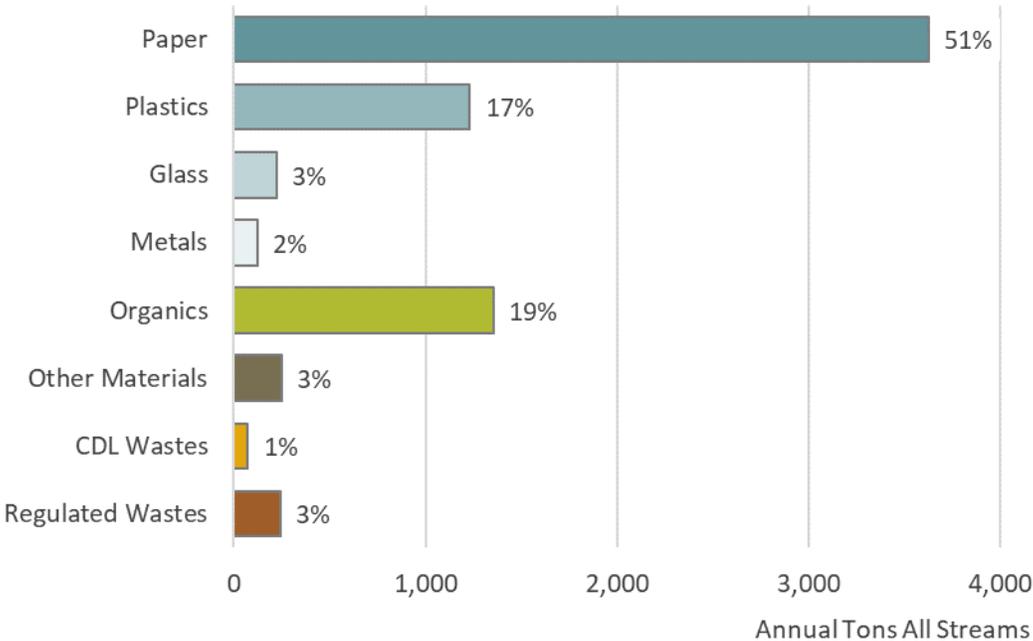
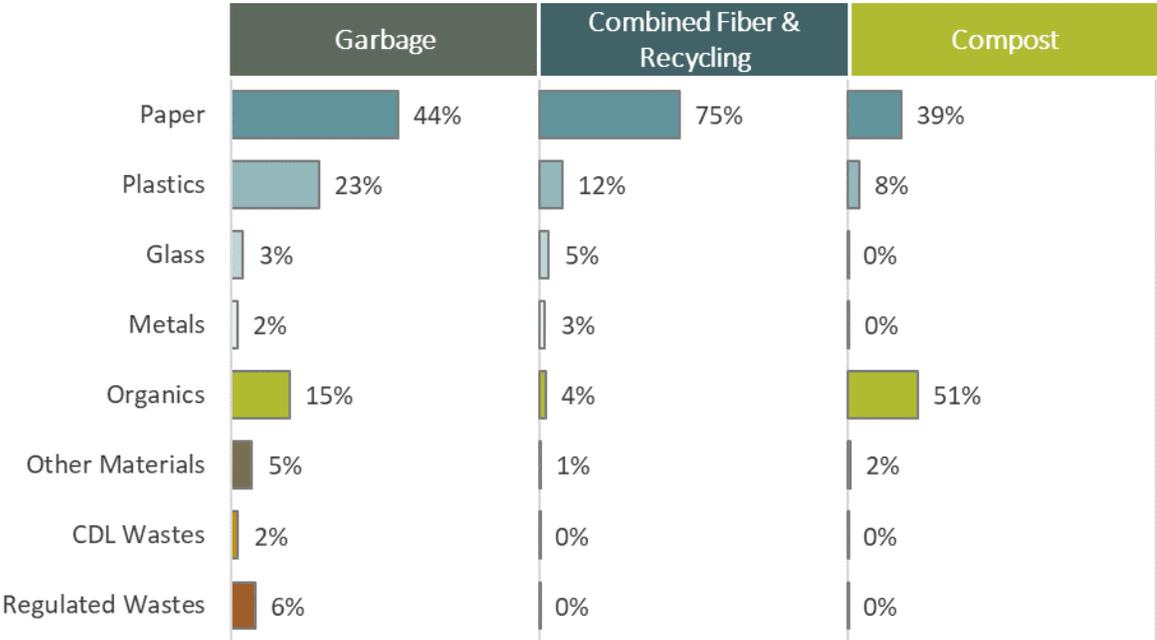


Figure 11 provides additional detail on the material class composition for campus-wide generation, showing the composition and relative quantities side-by-side for each stream. As shown:

- ▶ Paper (44%), plastics (23%), and organics (15%) are the largest material classes in garbage.
- ▶ Paper accounts for approximately three-quarters (75%) of the combined fiber and recycling streams.
- ▶ Organics make up over half (51%) of compost, followed by paper (39%).

Figure 11. Annual Tons by Material Class and Stream: Campus-wide



Bars report annual tons and percentages report class composition for each stream.

Table 6 lists the top materials generated by weight across all streams campus-wide, excluding the combined fiber stream. As shown, the top materials are *compostable/soiled paper* and *food*, each accounting for at least one-fifth (20%) of overall generation. An additional one-tenth (10%) of material generated campus-wide is *mixed low-grade paper*.

Table 6. Top Ten Material Types by Weight, All Streams: Campus-wide Results

| Material Type                     | Recoverability   | Est. Percent | Est. Tons    |
|-----------------------------------|------------------|--------------|--------------|
| Compostable/Soiled Paper          | Compostable      | 21%          | 1,282        |
| Food                              | Compostable      | 20%          | 1,275        |
| Mixed Low-grade Paper             | Mixed Recyclable | 10%          | 628          |
| Other Film                        | Non-recoverable  | 5%           | 338          |
| Plain OCC/Kraft Paper             | Mixed Recyclable | 5%           | 310          |
| Non-recoverable & Composite Paper | Non-recoverable  | 4%           | 268          |
| Red Bag Medical Waste             | Non-recoverable  | 3%           | 184          |
| PET Bottles & Containers          | Mixed Recyclable | 2%           | 124          |
| Beverage Glass                    | Mixed Recyclable | 2%           | 117          |
| High-grade Paper                  | Mixed Recyclable | 2%           | 112          |
| Top Ten Total                     |                  | 74%          | 4,638        |
| Remaining Recoverable             |                  | 13%          | 787          |
| Remaining Non-recoverable         |                  | 13%          | 809          |
| <b>Generation Annual Tons</b>     |                  | <b>100%</b>  | <b>6,233</b> |

## COMPOSITION RESULTS: CAMPUS-WIDE GARBAGE

This section presents composition results for campus-wide garbage. Figure 12 shows the composition of material disposed as garbage campus-wide by recoverability category. As shown, over one-third (35%) of material in the garbage is compostable, and nearly one-quarter (23%) is recyclable through campus recycling programs.

Figure 12. Annual Tons by Recoverability Category: Campus-wide Garbage

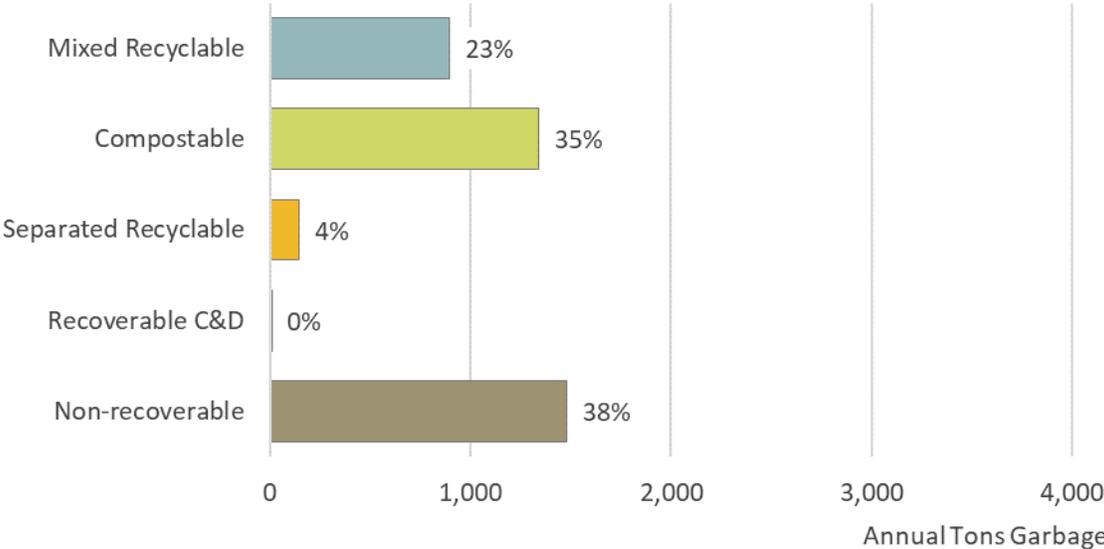


Table 7 presents the top material types in campus-wide garbage by weight. The three most prevalent material types are *compostable/soiled paper* (19%), *food* (14%), and *mixed low-grade paper* (13%), all recoverable through existing recycling or compost programs. Together, these three material types account for 46 percent of campus-wide garbage.

Table 7. Top Ten Material Types by Weight: Campus-wide Garbage

| Material Type                       | Recoverability   | Est. Percent | Est. Tons    |
|-------------------------------------|------------------|--------------|--------------|
| Compostable/Soiled Paper            | Compostable      | 19%          | 728          |
| Food                                | Compostable      | 14%          | 547          |
| Mixed Low-grade Paper               | Mixed Recyclable | 13%          | 503          |
| Other Film                          | Non-recoverable  | 8%           | 311          |
| Non-recoverable & Composite Paper   | Non-recoverable  | 6%           | 250          |
| Red Bag Medical Waste               | Non-recoverable  | 5%           | 184          |
| Lab Glass                           | Non-recoverable  | 2%           | 84           |
| Plain OCC/Kraft Paper               | Mixed Recyclable | 2%           | 83           |
| Non-recoverable & Composite Plastic | Non-recoverable  | 2%           | 82           |
| Other Plastic Products              | Non-recoverable  | 2%           | 64           |
| Top Ten Total                       |                  | 73%          | 2,835        |
| Remaining Recoverable               |                  | 14%          | 523          |
| Remaining Non-recoverable           |                  | 13%          | 503          |
| <b>Garbage Annual Tons</b>          |                  | <b>100%</b>  | <b>3,861</b> |

## COMPOSITION RESULTS: CAMPUS-WIDE RECYCLING

This section presents findings for campus-wide recycling. As shown in Figure 13, materials in campus-wide recycling are primarily mixed recyclable (74%). The remaining materials are contaminants to the recycling stream.

Figure 13. Annual Tons by Recoverability Category: Campus-wide Recycling

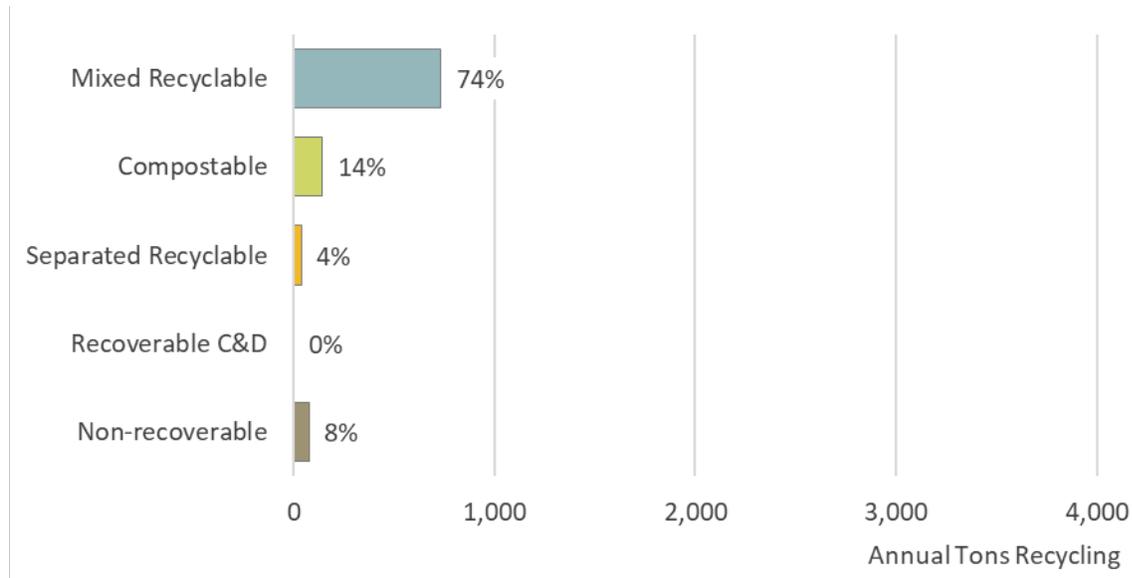


Table 8 shows the types and quantities of contaminants present in campus-wide recycling. It lists the top ten contaminants in the stream by weight. As shown, *food* and *compostable/soiled paper* are the top contaminants in campus-wide recycling, together accounting for over 10 percent of the stream.

Table 8. Top Ten Contaminants by Weight: Campus-wide Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons  |
|--|----------------------|--------------|------------|
| Food   | Compostable          | 7%           | 66         |
| Compostable/Soiled Paper                     | Compostable          | 6%           | 58         |
| Other Film                                   | Non-recoverable      | 2%           | 23         |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable | 2%           | 21         |
| Non-recoverable & Composite Paper            | Non-recoverable      | 2%           | 15         |
| Other Plastic Products                       | Non-recoverable      | 1%           | 14         |
| Compostable Single-use Food Service Plastics | Compostable          | 1%           | 13         |
| Other Clean Polyethylene Film                | Separated Recyclable | 1%           | 9          |
| Latex/Nitrile Gloves                         | Non-recoverable      | 0.4%         | 4          |
| Fines & Miscellaneous                        | Non-recoverable      | 0.4%         | 4          |
| <b>Top Ten Total</b>                         |                      | <b>23%</b>   | <b>225</b> |
| Remaining Recoverable                        |                      | 3%           | 31         |
| Remaining Non-recoverable                    |                      | 74%          | 729        |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>986</b> |

## COMPOSITION RESULTS: CAMPUS-WIDE COMPOST

This section describes composition results for the campus-wide compost stream. Figure 14 shows the composition of campus-wide compost by recoverability category and the accompanying tonnages. As shown, 92 percent of the campus-wide compost stream is recoverable. The remaining 8 percent of material consists of contaminants to the stream.

Figure 14. Annual Tons by Recoverability Category: Campus-wide Compost

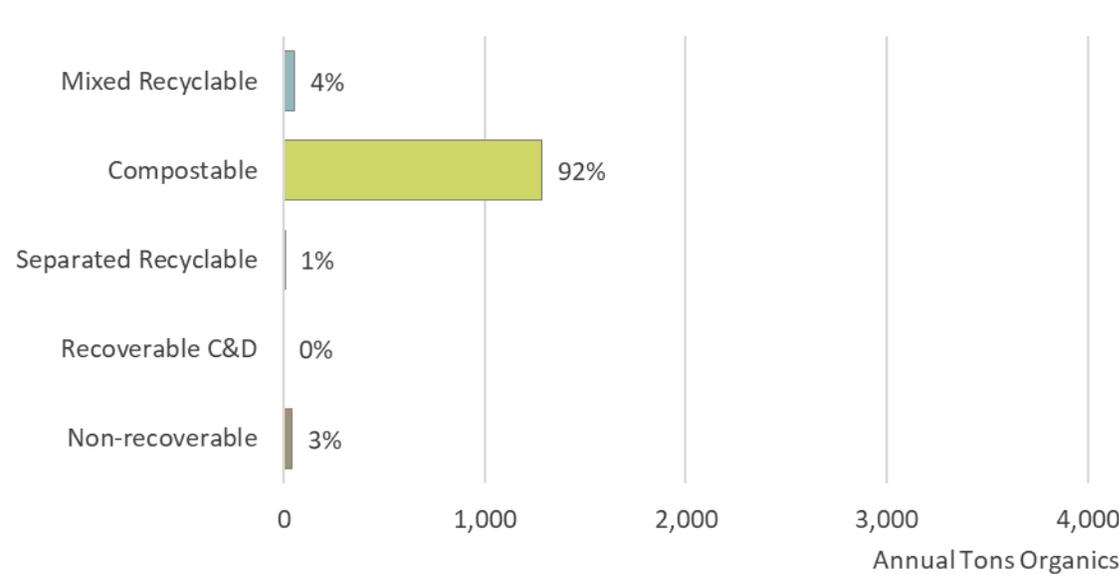


Table 9 lists the top contaminants in campus-wide compost stream by weight. As shown, *finest & miscellaneous* material is the most prevalent contaminant, accounting for approximately 2 percent of the compost stream—this material is non-recoverable and should be disposed of through garbage instead. Other common contaminants include *mixed low-grade paper*, *non-compostable single-use food service paper*, and *rigid containers*, each accounting for approximately 1 percent of the stream.

Table 9. Top Ten Contaminants by Weight: Campus-wide Compost

| Material Type                                 | Recoverability       | Est. Percent | Est. Tons    |
|---|----------------------|--------------|--------------|
| Fines & Miscellaneous                         | Non-recoverable      | 2%           | 24           |
| Mixed Low-grade Paper                         | Mixed Recyclable     | 1%           | 15           |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable     | 1%           | 14           |
| Rigid Containers                              | Mixed Recyclable     | 1%           | 8            |
| PET Bottles & Containers                      | Mixed Recyclable     | 0.3%         | 4            |
| Other Film                                    | Non-recoverable      | 0.3%         | 4            |
| Plain OCC/Kraft Paper                         | Mixed Recyclable     | 0.2%         | 3            |
| Non-recoverable & Composite Paper             | Non-recoverable      | 0.2%         | 3            |
| Other Clean Polyethylene Film                 | Separated Recyclable | 0.2%         | 3            |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable     | 0.2%         | 3            |
| <b>Top Ten Total</b>                          |                      | <b>6%</b>    | <b>81</b>    |
| Remaining Recoverable                         |                      | 2%           | 25           |
| Remaining Non-recoverable                     |                      | 92%          | 1,281        |
| <b>Compost Annual Tons</b>                    |                      | <b>100%</b>  | <b>1,387</b> |

## OPPORTUNITIES

This section presents opportunities for UW to increase recovery rates campus-wide. Figure 15 presents the relative tonnages of material in garbage, recycling, and compost campus-wide by recoverability category. For each stream, the white background shown in selected cells in the figure indicates the correct disposal method for the material. For example, for recycling and compost streams, the white background in the figure indicates in which stream material should be placed to maximize recovery, and the light gray background indicates that the material is a contaminant in the stream. The percentages in the figure are the capture rates for the material from that recoverability category to each stream.



For example, as shown, the recycling capture rate of mixed recyclable material is 63 percent, meaning that nearly two-thirds of mixed recyclables generated on campus are recovered through combined fiber or recycling streams, while the remaining 37 percent is disposed of through other streams (garbage and compost, from which they are not recovered). Less than half (46%) of compostable material is captured in the compost stream; most of the compostable material is disposed of as garbage. Capturing this material represents a significant opportunity to increase campus recovery rates.

Figure 15. Recoverability and Actual Disposal: Campus-Wide

|                      | Garbage | Combined Fiber & Recycling | Compost |
|----------------------|---------|----------------------------|---------|
| Mixed Recyclable     | 35%     | 63%                        | 2%      |
| Compostable          | 48%     | 5%                         | 46%     |
| Separated Recyclable | 76%     | 20%                        | 4%      |
| Recoverable C&D      | 100%    | 0%                         | 0%      |
| Non-recoverable      | 92%     | 5%                         | 3%      |

Bars report annual tons and percentages report capture of material by each stream.

Table 10 provides more detail on the types and quantities of material generated on campus that could be captured for recovery. The table shows the material type, recoverability category, current quantities of recovered material, the remaining tons of material (in non-recovery streams), and capture rate. As shown, *compostable/soiled paper* has the most remaining tons for recovery, with 786 tons not recovered through composting programs. This represents nearly one-third of the recoverable material remaining in UW's campus-wide material streams. Other material types with large potential for recovery are *recyclable paper & combined fiber* (738 tons remaining; 64% capture rate) and *food* (612 tons remaining; 52% capture rate).

Table 10. Top Recoverable Material Types: Campus-Wide

| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Compostable/Soiled Paper                     | Compostable      | 495            | 786            | 39%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 1,328          | 738            | 64%          |
| Food   | Compostable      | 663            | 612            | 52%          |
| Rigid Containers                             | Mixed Recyclable | 26             | 69             | 28%          |
| PET Bottles & Containers                     | Mixed Recyclable | 79             | 45             | 64%          |
| Compostable Single-use Food Service Plastics | Compostable      | 42             | 44             | 49%          |
| Beverage Glass                               | Mixed Recyclable | 89             | 28             | 76%          |
| Leaves/Grass/Prunings                        | Compostable      | 32             | 23             | 59%          |
| Other Ferrous                                | Mixed Recyclable | 4              | 17             | 20%          |
| Aluminum Cans                                | Mixed Recyclable | 26             | 12             | 69%          |
| <b>Recyclable</b>                            |                  | <b>1,612</b>   | <b>949</b>     | <b>63%</b>   |
| <b>Compostable</b>                           |                  | <b>1,281</b>   | <b>1,478</b>   | <b>46%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>2,893</b>   | <b>2,427</b>   | <b>54%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Academic Buildings

This section describes the quantities and composition of material disposed by academic buildings—which typically contain classrooms, libraries, and academic offices—in the garbage, recycling, compost, and combined fiber streams. The map below shows all the locations of collection containers for garbage, recycling, and compost from academic buildings. Building names associated with collection locations are included in the legend.

Figure 16. Garbage, Recycling, and Compost Collection Locations: Academic Buildings

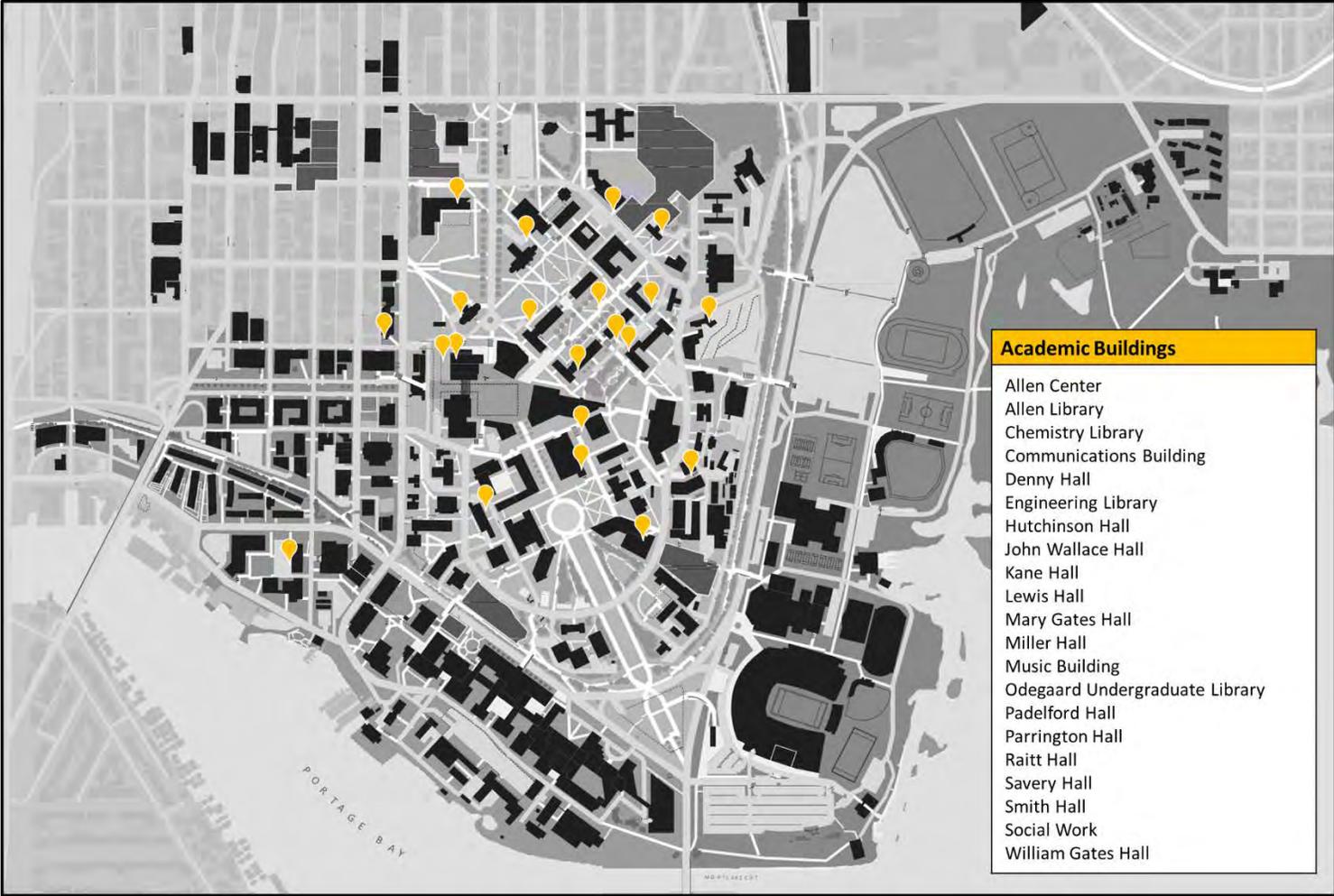


Figure 17 shows the composition of material disposed of in academic buildings by stream. Academic buildings disposed of 847 annual tons of material and achieved a 71 percent recovery rate. Compared to the other generator groups included in the study, academic buildings had the lowest percentage of material disposed as garbage and the second-highest percentage of material disposed as compost. In addition, it is one of only two generator groups that disposed more material as compost than as garbage (or any other stream).

Garbage disposal from academic buildings decreased by 46 percent since 2003, from 456 to 247 tons.

Figure 17. Annual Tons by Stream: Academic Buildings

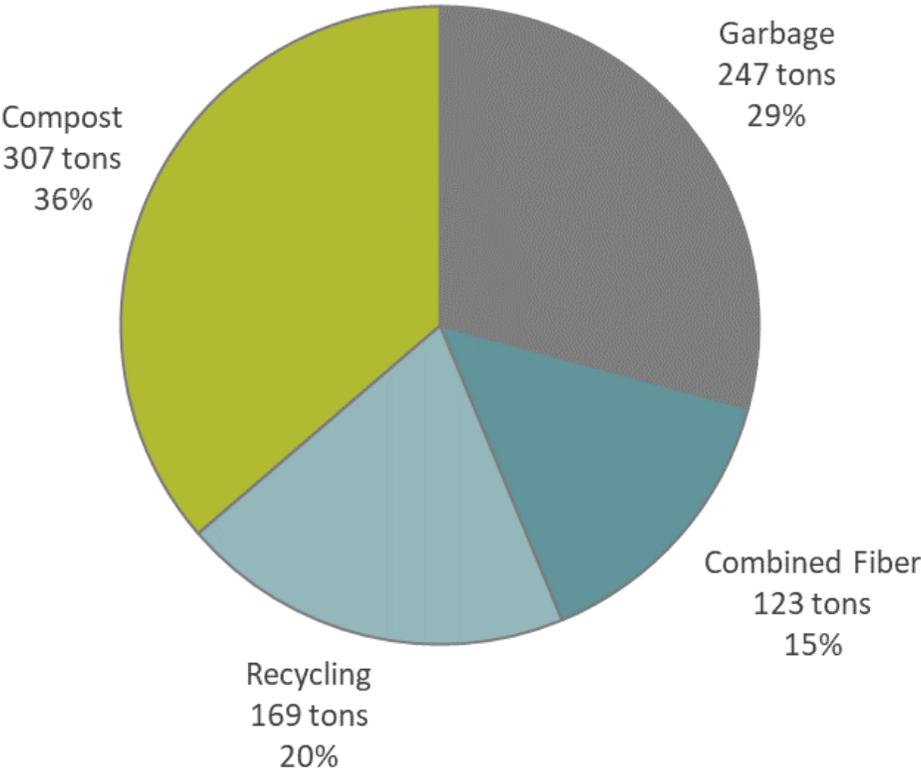
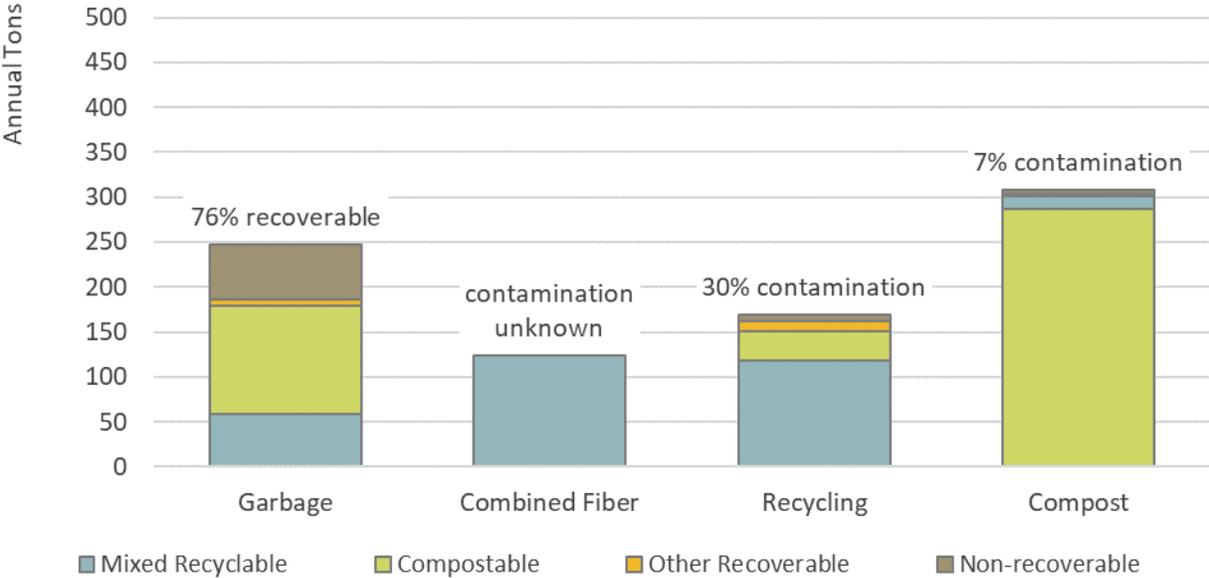


Figure 18 illustrates the portion of material in the garbage that is recoverable and the portion of recoverable streams (combined fiber, recycling, and compost) that contain non-recoverable material. The findings show that over three-quarters (76%) of academic building garbage could be potentially recovered if diverted to the appropriate stream. The recycling contamination rate is higher for academic buildings than for the campus overall (30% recycling contamination in academic buildings and 26% overall), and the compost contamination rate in academic buildings is less than the overall campus compost contamination rate (7% contamination in compost in academic building and 8% overall).

Figure 18. Recoverability and Contamination by Stream: Academic Buildings



*The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.*

Figure 19 shows the composition and quantities of academic building material by material class. The data include all material disposed in the garbage, recycling, combined fiber, and compost streams. The largest material classes disposed of by academic buildings are paper (51%), organics (26%), and plastics (16%).

Figure 19. Annual Tons by Material Class, All Streams: Academic Buildings

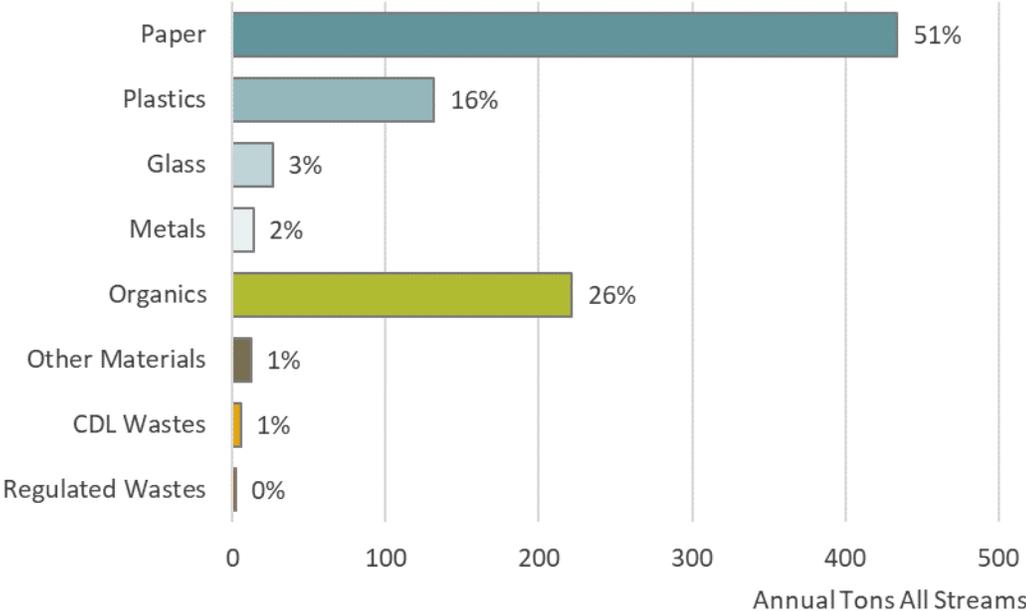
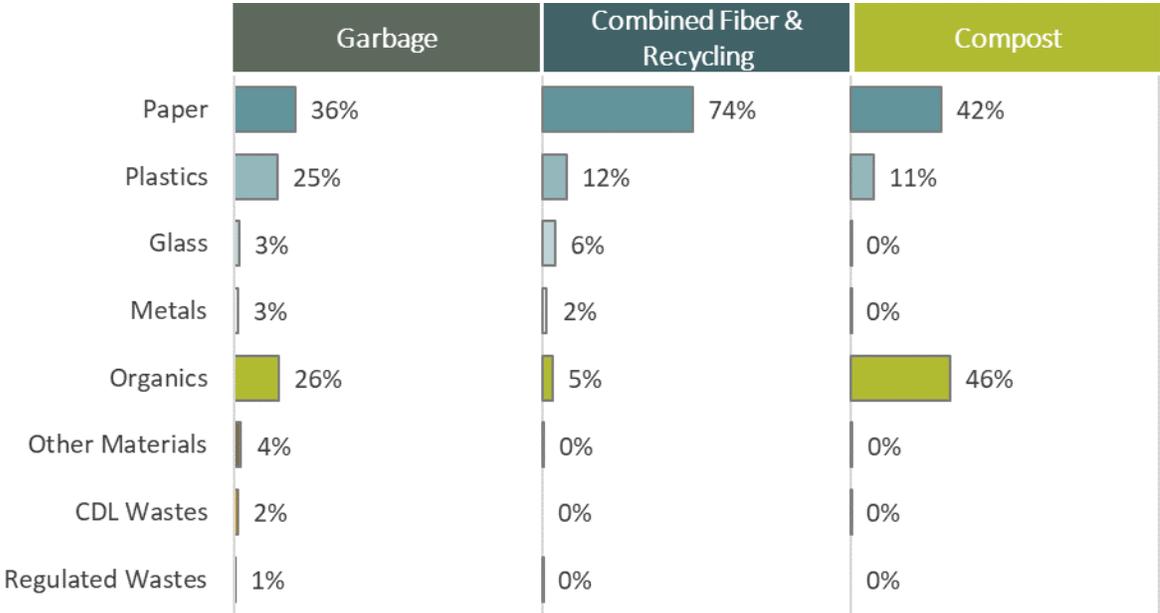


Figure 20 expands on the previous figure, showing the percent composition from academic buildings by material class for each stream, along with their relative quantities (as illustrated by bar length).

- ▶ Paper (36%), organics (26%), and plastics (25%) are the largest material classes in garbage, together representing approximately 87 percent of the stream.
- ▶ Nearly three-quarters (74%) of the combined fiber and recycling streams is paper.
- ▶ Organics (46%) and paper (42%) are the largest material classes in compost.

Figure 20. Annual Tons by Material Class and Stream: Academic Buildings



Bars report annual tons and percentages report class composition for each stream.

Table 11 lists the ten most prevalent material types by weight from academic buildings from the garbage, recycling, and compost streams combined. Over half of tons generated by academic buildings is compostable: *food* and *compostable/soiled paper* together account for 51 percent of academic building material. Only one non-recoverable material type is in the top ten generated material types in academic buildings, *other film*.

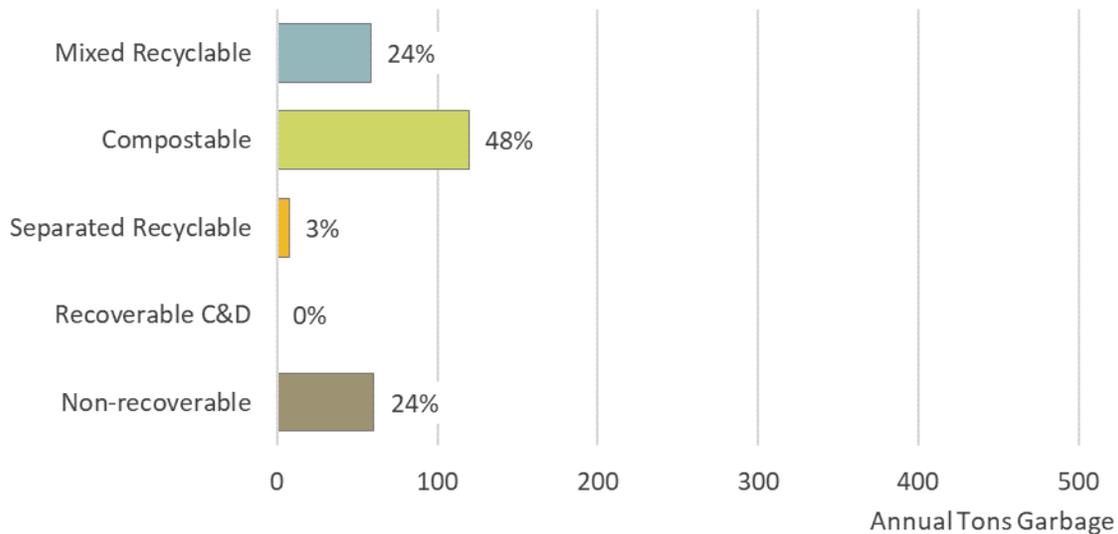
Table 11. Top Ten Material Types by Weight, All Streams: Academic Buildings

| Material Type                                | Recoverability   | Est. Percent | Est. Tons  |
|--|------------------|--------------|------------|
| Food   | Compostable      | 26%          | 192        |
| Compostable/Soiled Paper                     | Compostable      | 25%          | 182        |
| Mixed Low-grade Paper                        | Mixed Recyclable | 6%           | 44         |
| Plain OCC/Kraft Paper                        | Mixed Recyclable | 5%           | 35         |
| Other Film                                   | Non-recoverable  | 4%           | 29         |
| Leaves/Grass/Prunings                        | Compostable      | 4%           | 28         |
| Compostable Single-use Food Service Plastics | Compostable      | 3%           | 24         |
| High-grade Paper                             | Mixed Recyclable | 3%           | 23         |
| Beverage Glass                               | Mixed Recyclable | 3%           | 21         |
| PET Bottles & Containers                     | Mixed Recyclable | 2%           | 17         |
| Top Ten Total                                |                  | 82%          | 594        |
| Remaining Recoverable                        |                  | 12%          | 87         |
| Remaining Non-recoverable                    |                  | 6%           | 43         |
| <b>Generation Annual Tons</b>                |                  | <b>100%</b>  | <b>724</b> |

## COMPOSITION RESULTS: ACADEMIC BUILDINGS GARBAGE

This section presents the composition by recoverability category and the ten most prevalent material types by weight for garbage from academic buildings. As shown in Figure 21 below, nearly half (48%) of academic buildings garbage is compostable, and another quarter (24%) is recyclable.

Figure 21. Annual Tons by Recoverability Category: Academic Buildings Garbage



The top material types by weight in academic buildings garbage is shown below in Table 12. The most prevalent material types in the garbage are *food* (25%), *compostable/soiled paper* (20%), and *other film* (11%). The *food* and *compostable/soiled paper* together make up nearly half (45%) of academic buildings garbage and could be composted instead.

Table 12. Top Ten Material Types by Weight: Academic Buildings Garbage

| Material Type                                | Recoverability   | Est. Percent | Est. Tons  |
|--|------------------|--------------|------------|
| Food   | Compostable      | 25%          | 62         |
| Compostable/Soiled Paper                     | Compostable      | 20%          | 48         |
| Other Film                                   | Non-recoverable  | 11%          | 26         |
| Mixed Low-grade Paper                        | Mixed Recyclable | 8%           | 20         |
| Rigid Containers                             | Mixed Recyclable | 3%           | 8          |
| Compostable Single-use Food Service Plastics | Compostable      | 3%           | 7          |
| PET Bottles & Containers                     | Mixed Recyclable | 2%           | 5          |
| Plain OCC/Kraft Paper                        | Mixed Recyclable | 2%           | 4          |
| Non-recoverable & Composite Paper            | Non-recoverable  | 2%           | 4          |
| Beverage Glass                               | Mixed Recyclable | 1%           | 4          |
| Top Ten Total                                |                  | 76%          | 187        |
| Remaining Recoverable                        |                  | 12%          | 29         |
| Remaining Non-recoverable                    |                  | 12%          | 31         |
| <b>Garbage Annual Tons</b>                   |                  | <b>100%</b>  | <b>247</b> |

## COMPOSITION RESULTS: ACADEMIC BUILDINGS RECYCLING

This section presents the composition by recoverability category and the ten most prevalent material types by weight for recycling from academic buildings. As shown in Figure 22, academic buildings recycling is mostly mixed recyclable material (70%). One-fifth (20%) of material in the academic buildings recycling is compostable material, which is a contaminant when placed in recycling streams.

Figure 22. Annual Tons by Recoverability Category: Academic Buildings Recycling

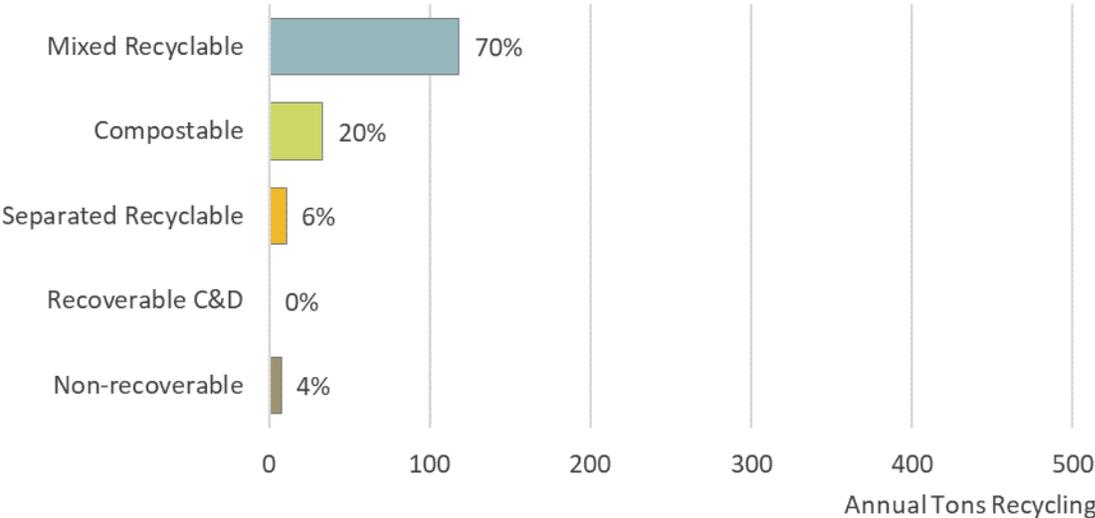


Table 13 lists the ten most prevalent contaminants in recycling by weight for academic buildings. Contaminants include material that is otherwise recoverable (such as compostable material) but cannot be processed if placed in recycling. As shown in the table below, *food* and *compostable/soiled paper* are the two most prevalent contaminants in academic building recycling, together making up nearly one-fifth (17%) of the stream. Other common contaminants are *loose clean shopping/dry cleaner bags* (5%) and *compostable single-use food service plastics* (3%).

Table 13. Top Ten Contaminants by Weight: Academic Buildings Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons  |
|--|----------------------|--------------|------------|
| Food   | Compostable          | 9%           | 15         |
| Compostable/Soiled Paper                     | Compostable          | 8%           | 13         |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable | 5%           | 8          |
| Compostable Single-use Food Service Plastics | Compostable          | 3%           | 5          |
| Non-recoverable & Composite Paper            | Non-recoverable      | 1%           | 2          |
| Other Film                                   | Non-recoverable      | 1%           | 2          |
| Hardcover Books                              | Separated Recyclable | 1%           | 1          |
| Non-recoverable & Composite Glass            | Non-recoverable      | 1%           | 1          |
| Fines & Miscellaneous                        | Non-recoverable      | 0.4%         | 1          |
| Other Clean Polyethylene Film                | Separated Recyclable | 0.2%         | 0          |
| <b>Top Ten Total</b>                         |                      | <b>29%</b>   | <b>49</b>  |
| Remaining Recoverable                        |                      | 1%           | 3          |
| Remaining Non-recoverable                    |                      | 70%          | 118        |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>169</b> |

## COMPOSITION RESULTS: ACADEMIC BUILDINGS COMPOST

This section presents the composition by recoverability category and the ten most prevalent material types by weight collected as compost from academic buildings. From academic buildings, 93 percent of compost is compostable material (Figure 23). The remaining 7 percent is contamination, most of which is mixed recyclable material.

Figure 23. Annual Tons by Recoverability Category: Academic Buildings Compost

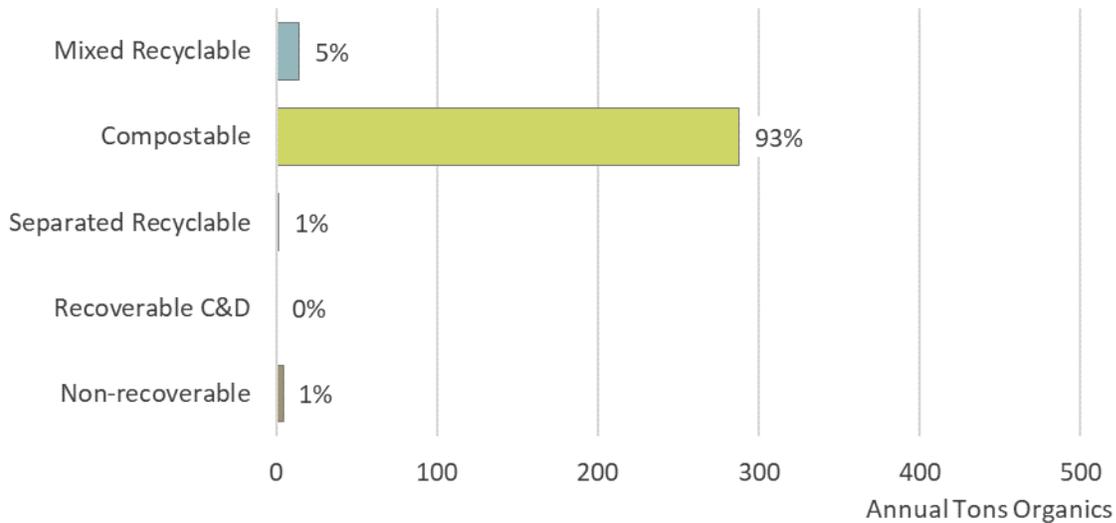


Table 14 provides a more detailed analysis of contaminants in compost from academic buildings. The most prevalent contaminants are *mixed low-grade paper*, *rigid containers*, and *non-compostable single-use food service paper*, each approximately 1 percent of the compost from academic buildings.

Table 14. Top Ten Contaminants by Weight: Academic Buildings Compost

| Material Type                                 | Recoverability       | Est. Percent | Est. Tons  |
|---|----------------------|--------------|------------|
| Mixed Low-grade Paper                         | Mixed Recyclable     | 1%           | 3          |
| Rigid Containers                              | Mixed Recyclable     | 1%           | 3          |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable     | 1%           | 3          |
| Other Film                                    | Non-recoverable      | 0.4%         | 1          |
| PET Bottles & Containers                      | Mixed Recyclable     | 0.4%         | 1          |
| Non-recoverable Rigid Packaging               | Non-recoverable      | 0.3%         | 1          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable     | 0.3%         | 1          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable | 0.2%         | 1          |
| Disposable Diapers                            | Non-recoverable      | 0.2%         | 1          |
| Other Single-use Aluminum                     | Mixed Recyclable     | 0.2%         | 1          |
| <b>Top Ten Total</b>                          |                      | <b>5%</b>    | <b>16</b>  |
| Remaining Recoverable                         |                      | 2%           | 5          |
| Remaining Non-recoverable                     |                      | 93%          | 287        |
| <b>Compost Annual Tons</b>                    |                      | <b>100%</b>  | <b>307</b> |

## OPPORTUNITIES

This section summarizes opportunities to increase recovery rates in academic buildings at UW. Figure 24 shows the relative quantities of material by recoverability category and the capture rates for each stream. Table 15 expands on this analysis, listing the top recoverable material types by weight and their capture rates.

As shown in Figure 24, mixed recyclable material is 19 percent of garbage, but this material is recoverable if placed in the combined fiber or recycling streams. The capture of organic material from academic buildings could be improved—65 percent of compostable material generated across all streams is captured in compost collection, but 35 percent of compostable material is ending up in the garbage.

Figure 24. Recoverability and Actual Disposal: Academic Buildings

|                      | Garbage | Combined Fiber & Recycling | Compost |
|----------------------|---------|----------------------------|---------|
| Mixed Recyclable     | 19%     | 77%                        | 5%      |
| Compostable          | 27%     | 8%                         | 65%     |
| Separated Recyclable | 40%     | 52%                        | 8%      |
| Recoverable C&D      | 100%    | 0%                         | 0%      |
| Non-recoverable      | 84%     | 10%                        | 6%      |

Bars report annual tons and percentages report capture of material by each stream.

Recoverable materials in Table 15 are listed in order from most recoverable tons remaining (not already captured in recycling or compost as appropriate) to least. Overall, *food, compostable/soiled paper, and recyclable paper & combined fiber* have the most tons remaining for recovery. Materials with low capture rates can also reflect another opportunity to recover more materials. For example, compostable single-use food service plastics have a capture rate of 51 percent, which means that nearly half of this material generated by academic buildings—equal to 12 tons—remains in garbage or recycling.

Table 15. Top Recoverable Material Types: Academic Buildings

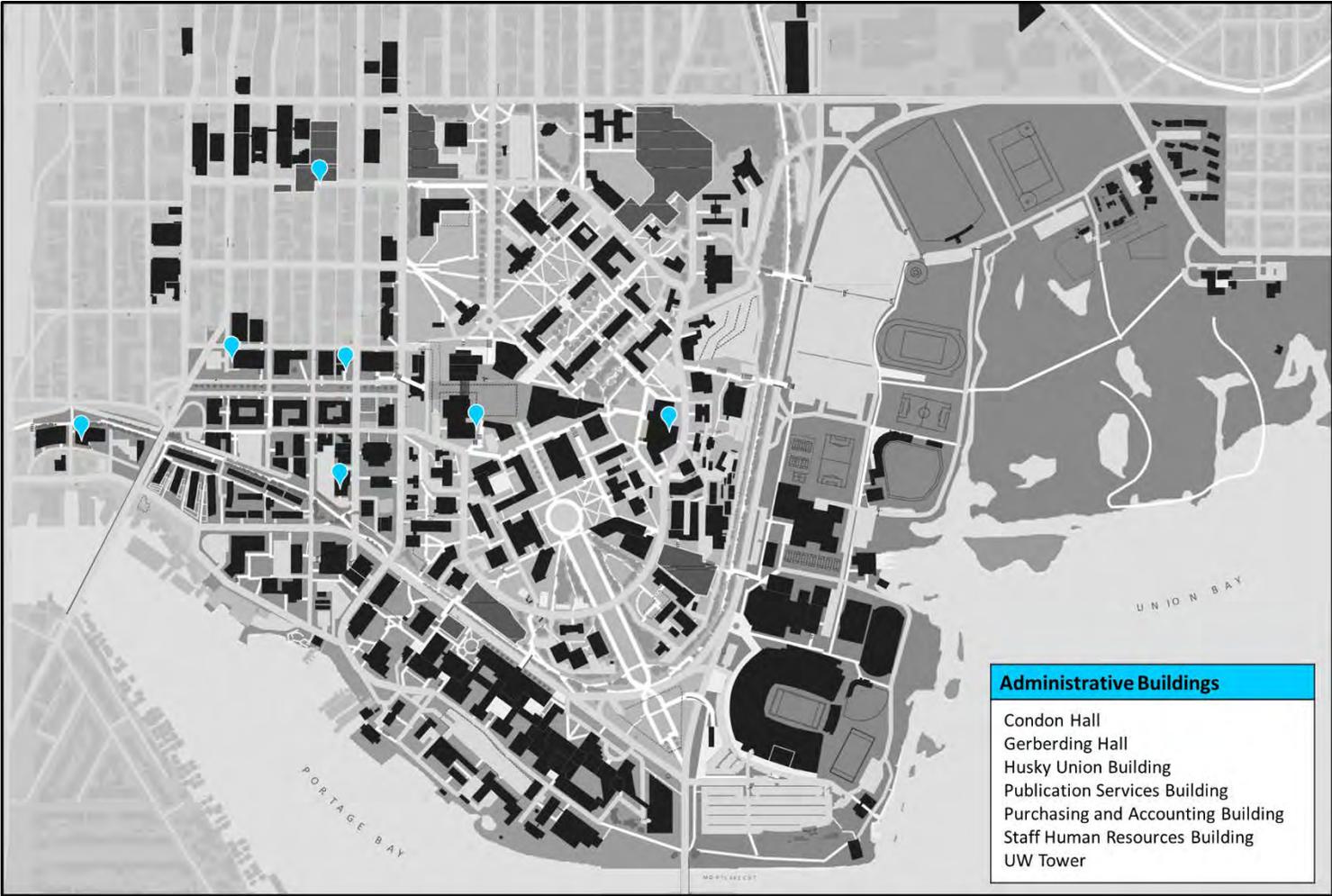
| Material Type                                | Recoverability   | Tons       |            | Capture Rate |
|--|------------------|------------|------------|--------------|
|  |                  | Recovered  | Remaining  |              |
| Food   | Compostable      | 115        | 76         | 60%          |
| Compostable/Soiled Paper                     | Compostable      | 120        | 61         | 66%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 199        | 44         | 82%          |
| Compostable Single-use Food Service Plastics | Compostable      | 12         | 12         | 51%          |
| Rigid Containers                             | Mixed Recyclable | 4          | 11         | 26%          |
| PET Bottles & Containers                     | Mixed Recyclable | 12         | 6          | 68%          |
| Beverage Glass                               | Mixed Recyclable | 17         | 4          | 81%          |
| HDPE Natural Bottles & Tubs                  | Mixed Recyclable | 2          | 2          | 46%          |
| Other Single-use Aluminum                    | Mixed Recyclable | 0          | 2          | 12%          |
| Leaves/Grass/Prunings                        | Compostable      | 26         | 2          | 93%          |
| <b>Recyclable</b>                            |                  | <b>241</b> | <b>73</b>  | <b>77%</b>   |
| <b>Compostable</b>                           |                  | <b>287</b> | <b>153</b> | <b>65%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>528</b> | <b>226</b> | <b>70%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Administrative Buildings

This section presents the quantities and composition of material disposed to the garbage, recycling, combined fiber, and compost streams by administrative buildings, which typically contain offices. Examples of administrative buildings include the UW Tower and Gerberding Hall. The map below shows all locations of collection containers for garbage, recycling, and compost from administrative buildings.

Figure 25. Garbage, Recycling, and Compost Collection Locations: Administrative Buildings



Administrative buildings disposed of 507 tons annually and achieved a 70 percent recovery rate. Figure 26 shows the composition of disposed administrative building material by stream. Administrative buildings achieved the second-highest recovery rate of all generator groups included in the study, second only to academic buildings. In addition, administrative buildings had the highest portion of material that was captured as compost compared to the other generator groups. Administrative buildings and academic buildings are the only two generator groups that disposed more material as compost than as garbage (or any other stream).

Garbage disposal from academic buildings decreased by 58 percent since 2003, from 364 to 152 tons.

Figure 26. Annual Tons by Stream: Administrative Buildings

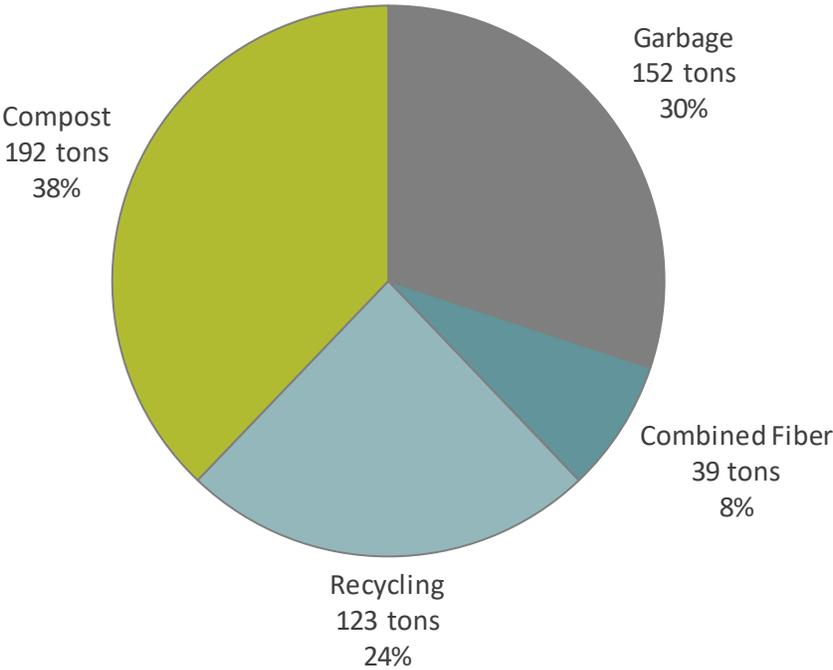
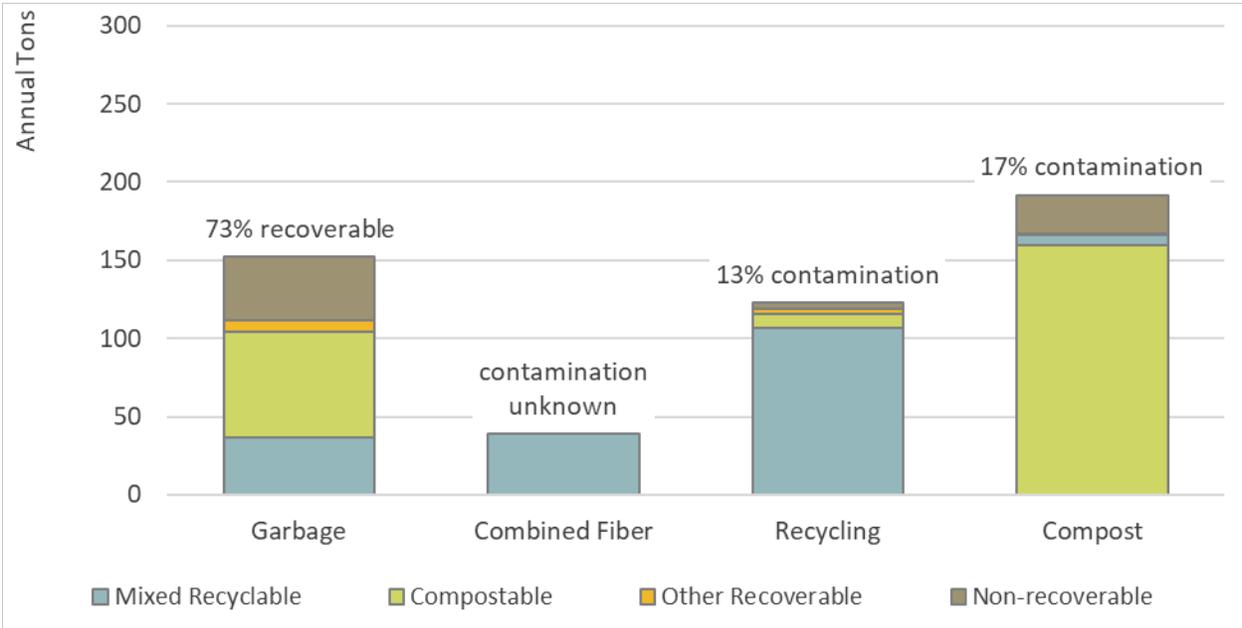


Figure 27 shows the composition of material by recoverability category for material from each stream generated by administrative buildings. Nearly three-quarters (73%) of garbage from administrative buildings is recoverable through recycling, combined fiber, or compost collection. The recycling contamination rate of administrative buildings is lower than for the campus overall (13% recycling contamination in administration buildings vs. 26% overall), and compost contamination is higher from administrative buildings than the contamination rate for the campus overall (17% vs. 8% overall). Similarly, when compared to other generator groups, administrative buildings had the lowest amount of contamination in the recycling stream, but the highest amount of contamination in the compost stream.

Figure 27. Recoverability and Contamination by Stream: Administrative Buildings



The quantities and percentages of material disposed in the garbage, recycling, combined fiber, and compost streams in administrative buildings by material class are presented in Figure 28. Paper (49%), organics (22%), and plastics (17%) are the largest material classes present, together accounting for 88 percent of the material.

Figure 28. Annual Tons by Material Class, All Streams: Administrative Buildings

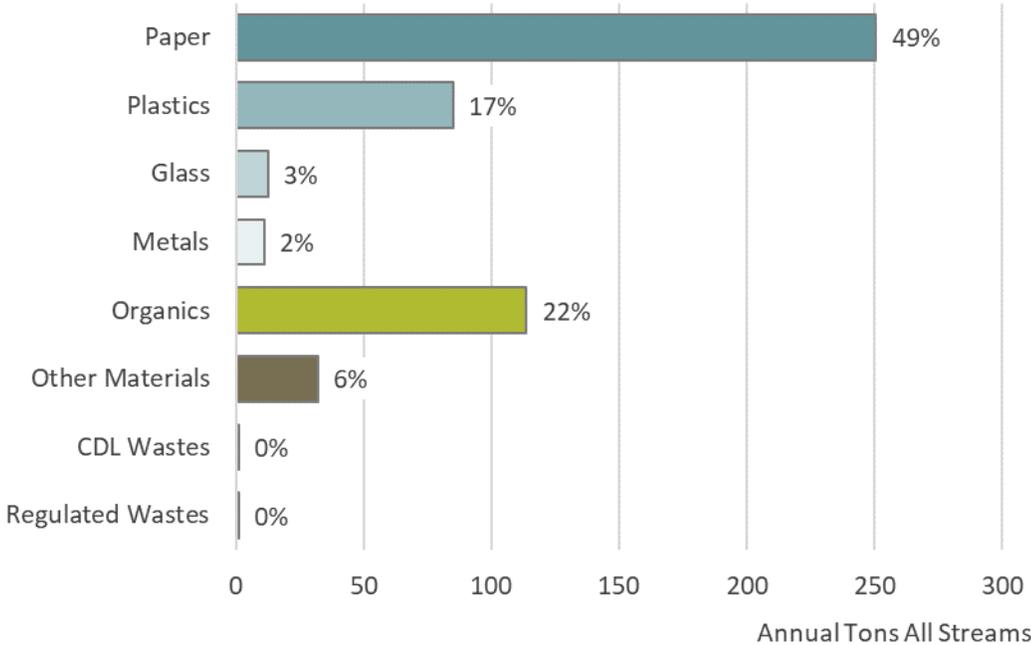
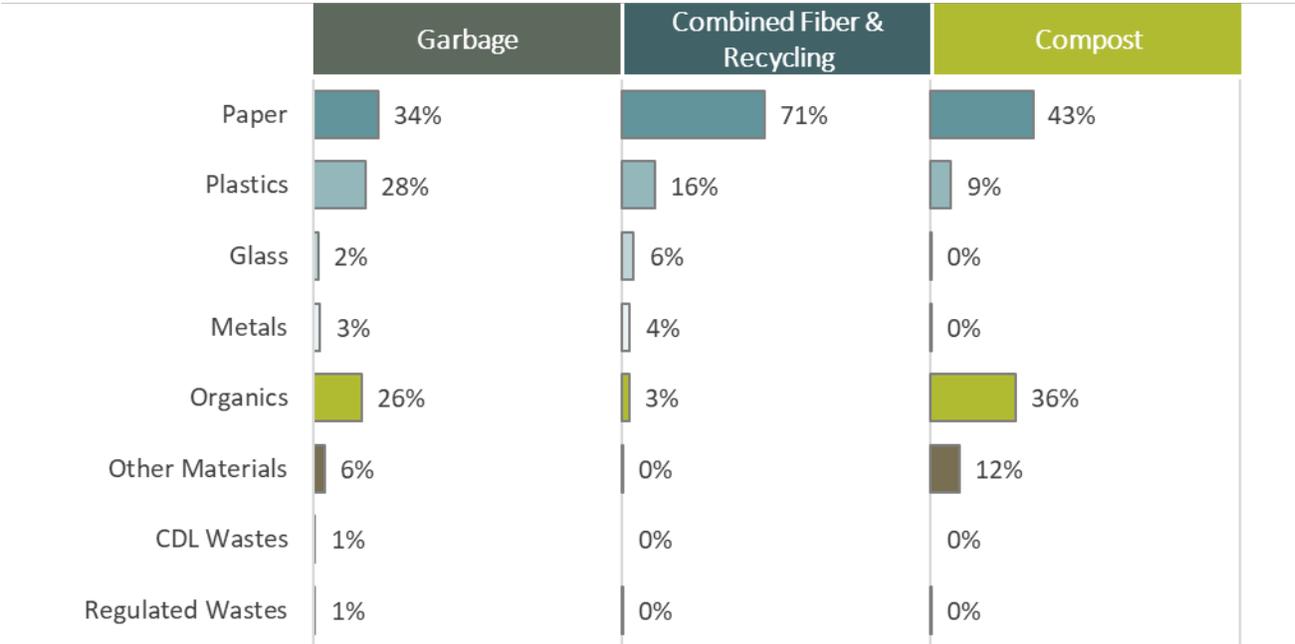


Figure 29 shows the percent composition of administrative buildings by material class for each stream, along with their relative tonnages.

- ▶ Paper fiber (34%), plastics (28%), and organics (26%) are the largest material classes in garbage, making up approximately 88 percent of the stream.
- ▶ Over 70 percent of the combined fiber and recycling streams is paper.
- ▶ The largest material classes in compost are paper (43%) and organics (36%), together representing over three-quarters (79%) of the stream.

Figure 29. Annual Tons by Material Class and Stream: Administrative Buildings



Bars report annual tons and percentages report class composition for each stream.

Table 16 displays the top ten material types by weight found in all streams, excluding combined fiber. *Food* and *compostable/soiled paper* are the two largest material types found in administrative buildings. Taken together, these material types are less than half (46%) of materials generated in administrative buildings. Another prevalent material type in administrative buildings is *plain OCC/Kraft paper* (11%).

Table 16. Top Ten Material Types by Weight, All Streams: Administrative Buildings

| Material Type                                | Recoverability   | Est. Percent | Est. Tons  |
|--|------------------|--------------|------------|
| Food   | Compostable      | 23%          | 109        |
| Compostable/Soiled Paper                     | Compostable      | 23%          | 108        |
| Plain OCC/Kraft Paper                        | Mixed Recyclable | 11%          | 52         |
| Fines & Miscellaneous                        | Non-recoverable  | 5%           | 25         |
| Mixed Low-grade Paper                        | Mixed Recyclable | 4%           | 18         |
| Other Film                                   | Non-recoverable  | 4%           | 18         |
| PET Bottles & Containers                     | Mixed Recyclable | 3%           | 16         |
| Newspaper                                    | Mixed Recyclable | 3%           | 15         |
| Compostable Single-use Food Service Plastics | Compostable      | 2%           | 10         |
| Beverage Glass                               | Mixed Recyclable | 2%           | 10         |
| Top Ten Total                                |                  | 82%          | 382        |
| Remaining Recoverable                        |                  | 13%          | 59         |
| Remaining Non-recoverable                    |                  | 6%           | 27         |
| <b>Generation Annual Tons</b>                |                  | <b>100%</b>  | <b>467</b> |

## COMPOSITION RESULTS: ADMINISTRATIVE BUILDINGS GARBAGE

This section describes the composition by recoverability category and the ten most prevalent material types by weight for garbage from administrative buildings. Figure 30 shows the composition of material generated by recoverability category. As shown, nearly half (45%) of garbage generated by administrative buildings is recoverable through compost and nearly one-quarter (24%) of garbage is recoverable through recycling.

Figure 30. Annual Tons by Recoverability Category: Administrative Buildings Garbage

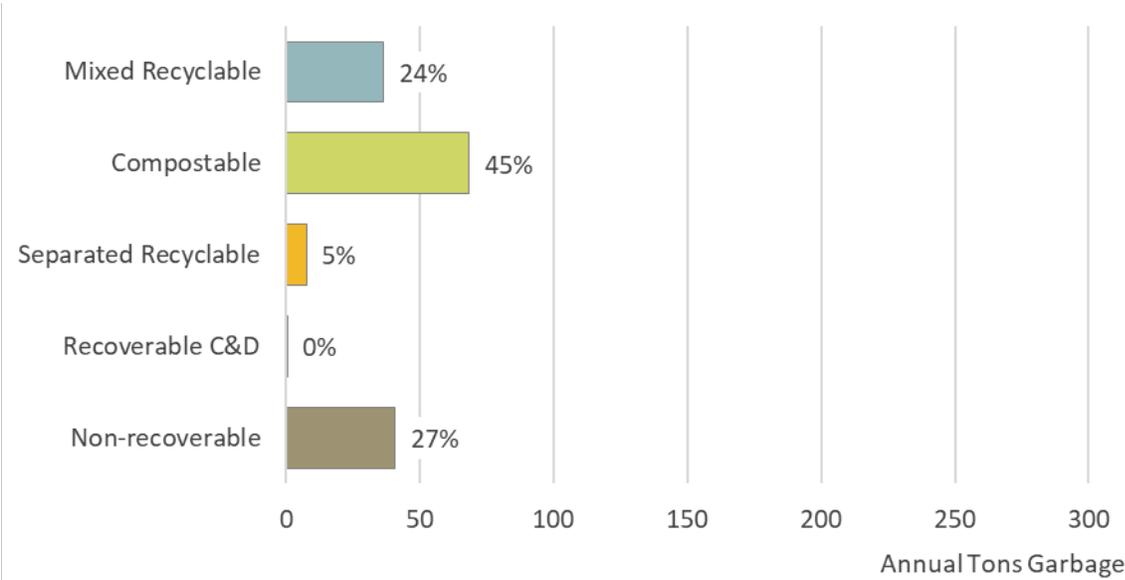


Table 17 presents the top ten material types by weight in garbage generated by administrative buildings. The most prevalent material types in the garbage are *food* (23%), *compostable/soiled paper* (19%), *other film* (10%), and *mixed low-grade paper* (8%).

Table 17. Top Ten Material Types by Weight: Administrative Buildings Garbage

| Material Type                                | Recoverability   | Est. Percent | Est. Tons  |
|--|------------------|--------------|------------|
| Food   | Compostable      | 23%          | 35         |
| Compostable/Soiled Paper                     | Compostable      | 19%          | 28         |
| Other Film                                   | Non-recoverable  | 10%          | 15         |
| Mixed Low-grade Paper                        | Mixed Recyclable | 8%           | 13         |
| Rigid Containers                             | Mixed Recyclable | 4%           | 5          |
| Non-recoverable & Composite Paper            | Non-recoverable  | 3%           | 4          |
| Plain OCC/Kraft Paper                        | Mixed Recyclable | 2%           | 4          |
| PET Bottles & Containers                     | Mixed Recyclable | 2%           | 3          |
| Compostable Single-use Food Service Plastics | Compostable      | 2%           | 3          |
| Non-recoverable & Composite Organics         | Non-recoverable  | 2%           | 3          |
| Top Ten Total                                |                  | 75%          | 115        |
| Remaining Recoverable                        |                  | 13%          | 20         |
| Remaining Non-recoverable                    |                  | 12%          | 18         |
| <b>Garbage Annual Tons</b>                   |                  | <b>100%</b>  | <b>152</b> |

## COMPOSITION RESULTS: ADMINISTRATIVE BUILDINGS RECYCLING

This section presents the composition by recoverability category and the ten most prevalent material types by weight for recycling from administrative buildings. As shown in Figure 31, nearly 90 percent of material collected for recycling from administrative buildings is mixed recyclable material.

Figure 31. Annual Tons by Recoverability Category: Administrative Buildings Recycling

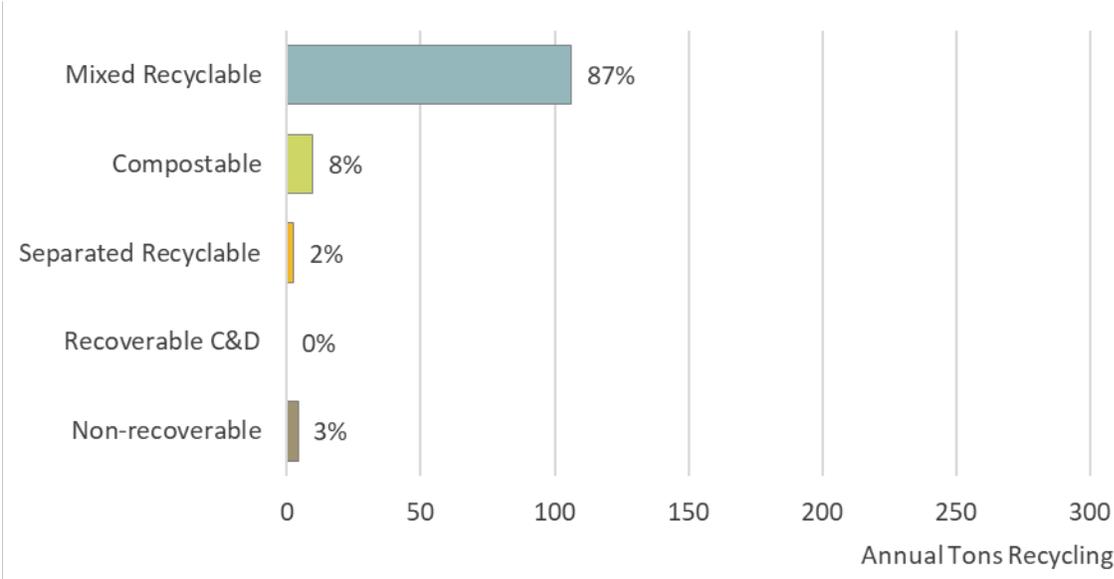


Table 18 shows the ten most prevalent contaminants in recycling by weight for administrative buildings. The most prevalent contaminant is *food* (4%). Other top contaminants include *compostable/soiled paper* and *other film*, each accounting for approximately 2 percent of the stream.

**Table 18. Top Ten Contaminants by Weight: Administrative Buildings Recycling**

| <b>Material Type</b>                         | <b>Recoverability</b> | <b>Est. Percent</b> | <b>Est. Tons</b> |
|--|-----------------------|---------------------|------------------|
| Food   | Compostable           | 4%                  | 5                |
| Compostable/Soiled Paper                     | Compostable           | 2%                  | 3                |
| Other Film                                   | Non-recoverable       | 2%                  | 2                |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable  | 1%                  | 2                |
| Compostable Single-use Food Service Plastics | Compostable           | 1%                  | 1                |
| Expanded Polystyrene                         | Separated Recyclable  | 1%                  | 1                |
| Non-recoverable & Composite Metal            | Non-recoverable       | 0.4%                | 1                |
| Other Plastic Products                       | Non-recoverable       | 0.3%                | 0                |
| Other Clean Polyethylene Film                | Separated Recyclable  | 0.2%                | 0                |
| Non-recoverable & Composite Paper            | Non-recoverable       | 0.2%                | 0                |
| <b>Top Ten Total</b>                         |                       | <b>13%</b>          | <b>15</b>        |
| Remaining Recoverable                        |                       | 1%                  | 1                |
| Remaining Non-recoverable                    |                       | 87%                 | 106              |
| <b>Recycling Annual Tons</b>                 |                       | <b>100%</b>         | <b>123</b>       |

## COMPOSITION RESULTS: ADMINISTRATIVE BUILDINGS COMPOST

This section presents the composition by recoverability category and the ten most prevalent material types by weight for the compost stream from administrative buildings. Approximately 83 percent of administrative building compost stream is compostable. Approximately 13 percent of material is non-recoverable, meaning the material cannot be recycled or composted. Figure 32 below shows the composition of the compost stream from administrative buildings by recoverability category.

Figure 32. Annual Tons by Recoverability Category: Administrative Buildings Compost

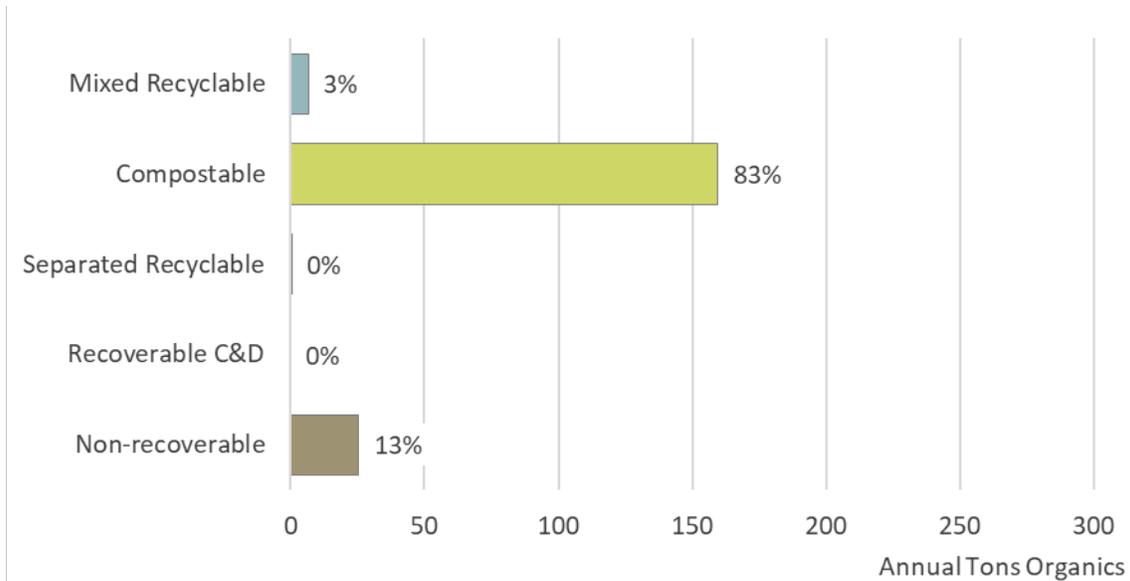


Table 19 presents the top ten contaminants by weight in compost from administrative buildings. The most prevalent contaminant is *finest & miscellaneous*, which comprises nearly one-eighth (12%) of material found in compost.

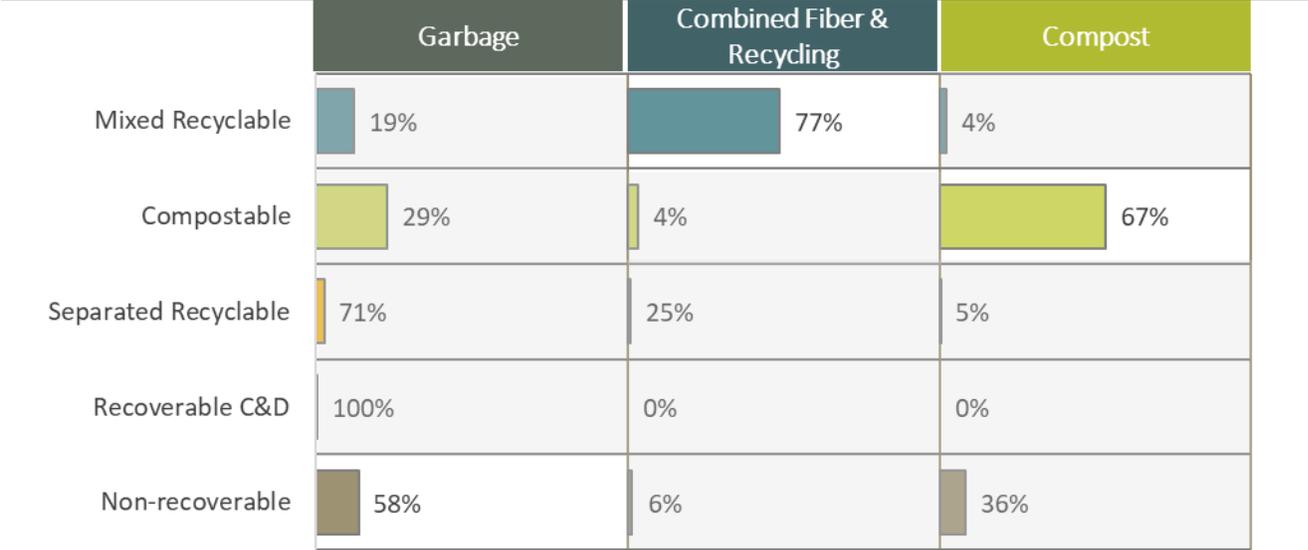
Table 19. Top Ten Contaminants by Weight: Administrative Buildings Compost

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons  |
|---|------------------|--------------|------------|
| Fines & Miscellaneous                         | Non-recoverable  | 12%          | 23         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 2%           | 3          |
| Non-recoverable & Composite Paper             | Non-recoverable  | 0.4%         | 1          |
| Rigid Containers                              | Mixed Recyclable | 0.4%         | 1          |
| Mixed Low-grade Paper                         | Mixed Recyclable | 0.3%         | 1          |
| Other Film                                    | Non-recoverable  | 0.3%         | 1          |
| PET Bottles & Containers                      | Mixed Recyclable | 0.2%         | 0          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable | 0.2%         | 0          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable | 0.2%         | 0          |
| Non-recoverable Rigid Packaging               | Non-recoverable  | 0.2%         | 0          |
| <b>Top Ten Total</b>                          |                  | <b>16%</b>   | <b>31</b>  |
| Remaining Recoverable                         |                  | 1%           | 1          |
| Remaining Non-recoverable                     |                  | 83%          | 160        |
| <b>Compost Annual Tons</b>                    |                  | <b>100%</b>  | <b>192</b> |

## OPPORTUNITIES

This section summarizes opportunities to increase recovery rates of material from administrative buildings at UW. Figure 33 displays the relative quantities of material by recoverability category and the capture rates for each stream. For each stream, the white background shown in selected cells in the figure indicates the correct disposal method for the material. For example, as shown, approximately 29 percent of compostable material is ending up in the garbage, representing an opportunity to recover compostable material from the garbage. Similarly, approximately one-fifth (19%) of combined fiber and mixed recyclable material is placed in the garbage and could be recovered if placed in the recycling.

Figure 33. Recoverability and Actual Disposal: Administrative Buildings



Bars report annual tons and percentages report capture of material by each stream.

Table 20 shows the material types with the greatest opportunity for recovery. They are listed in order from most recoverable tons remaining (tons not already captured in recycling or compost as appropriate) to least. Overall, *food, compostable/soiled paper, and recyclable paper & combined fiber* have the most tons remaining for recovery. Materials with low capture rates also present an opportunity to recover more materials. For example, approximately 56 percent of *compostable single-use food service plastics* is captured in compost, meaning that the remaining 44 percent is ending up in the garbage or recycling.

Table 20. Top Recoverable Material Types: Administrative Buildings

| Material Type                                | Recoverability   | Tons       |            | Capture Rate |
|--|------------------|------------|------------|--------------|
|  |                  | Recovered  | Remaining  |              |
| Food   | Compostable      | 68         | 41         | 63%          |
| Compostable/Soiled Paper                     | Compostable      | 77         | 31         | 71%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 112        | 25         | 82%          |
| Rigid Containers                             | Mixed Recyclable | 4          | 6          | 38%          |
| Compostable Single-use Food Service Plastics | Compostable      | 6          | 5          | 56%          |
| PET Bottles & Containers                     | Mixed Recyclable | 12         | 4          | 76%          |
| Beverage Glass                               | Mixed Recyclable | 7          | 3          | 69%          |
| Other Ferrous                                | Mixed Recyclable | 0          | 1          | 3%           |
| Other Single-use Aluminum                    | Mixed Recyclable | 0          | 1          | 11%          |
| Aluminum Cans                                | Mixed Recyclable | 4          | 1          | 85%          |
| <b>Recyclable</b>                            |                  | <b>146</b> | <b>43</b>  | <b>77%</b>   |
| <b>Compostable</b>                           |                  | <b>160</b> | <b>78</b>  | <b>67%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>305</b> | <b>121</b> | <b>72%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Arts and Design Buildings

This section describes the quantities and composition of material disposed in the garbage, recycling, combined fiber, and compost streams for arts and design buildings. These buildings include University galleries, theaters, and buildings occupied by fine arts, performance arts, design and architectural programs. The map below shows all locations of collection containers for material from arts and design buildings.

Figure 34. Garbage, Recycling, and Compost Collection Locations: Arts and Design Buildings



Arts and design buildings generated 164 tons of material and achieved a recovery rate of 66 percent. Figure 35 shows the composition of material generated by art buildings by stream. Arts and design buildings have the third-highest recovery rate of the generator groups included in the study and have the highest portion of disposed material that is recovered through the recycling and combined fiber streams (45 percent).

Garbage disposal from arts and design buildings decreased by 80 percent since 2003, from 269 to 55 tons.

Figure 35. Annual Tons by Stream: Arts and Design Buildings

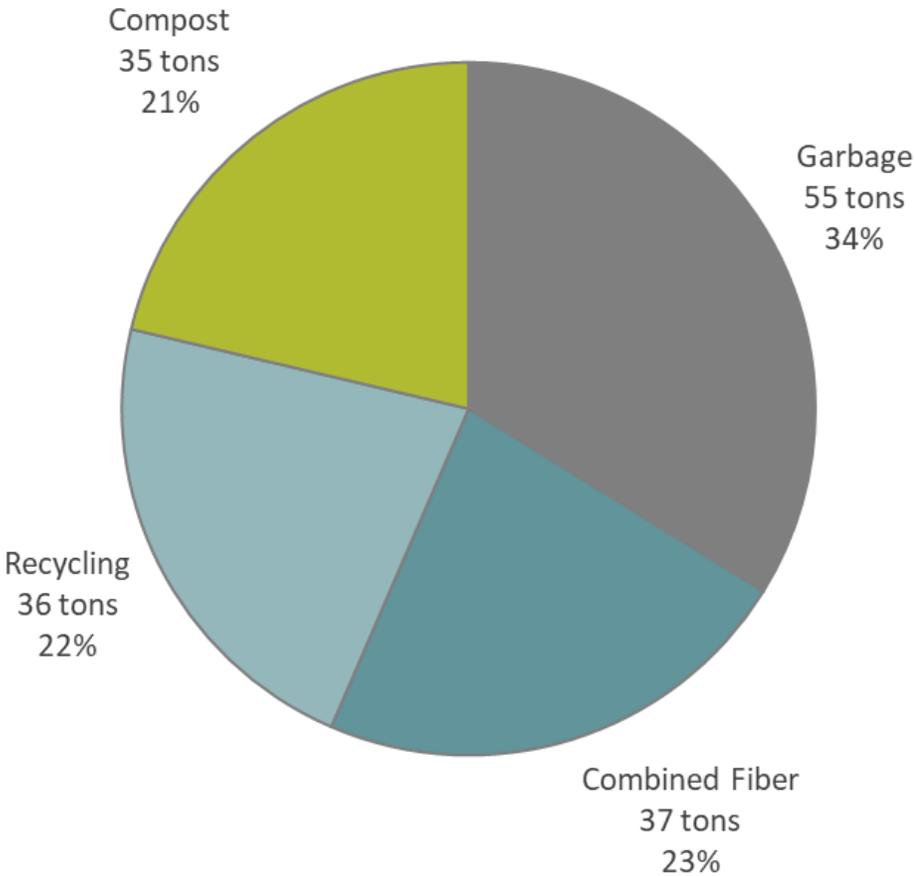
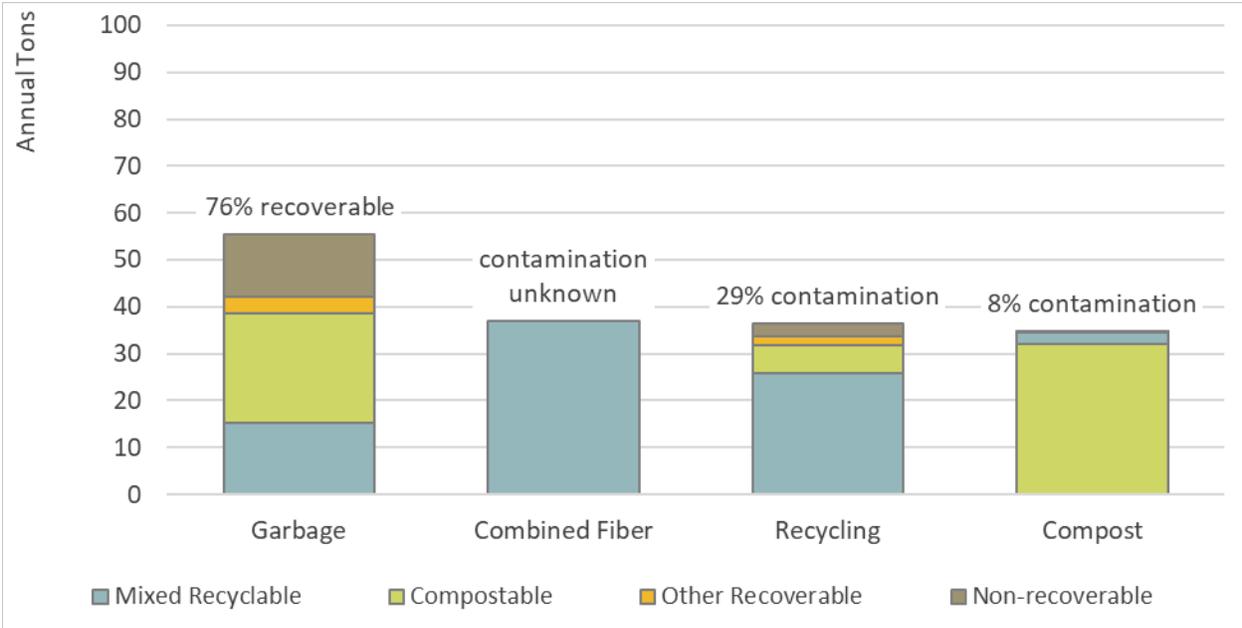


Figure 36 shows the composition of material by recoverability category for material from each stream generated by art buildings. More than three-quarters (76%) of garbage from arts and design buildings is recoverable through recycling, combined fiber, or compost collection. Recycling contamination in art buildings is higher than for the campus overall (29% contamination in art buildings vs. 26% overall), while compost contamination rates in arts and design buildings is slightly lower than for the overall campus (7% in art buildings vs. 8% overall).

Figure 36. Recoverability and Contamination by Stream: Arts and Design Buildings



The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.

The quantities and percentage of material disposed in garbage, recycling, combined fiber, and compost streams from arts and design buildings by material class is shown in Figure 37. Paper (57%), organics (18%), and plastics (16%) are the largest material classes present in this stream, together accounting for over 90 percent of the material.

Figure 37. Annual Tons by Material Class, All Streams: Arts and Design Buildings

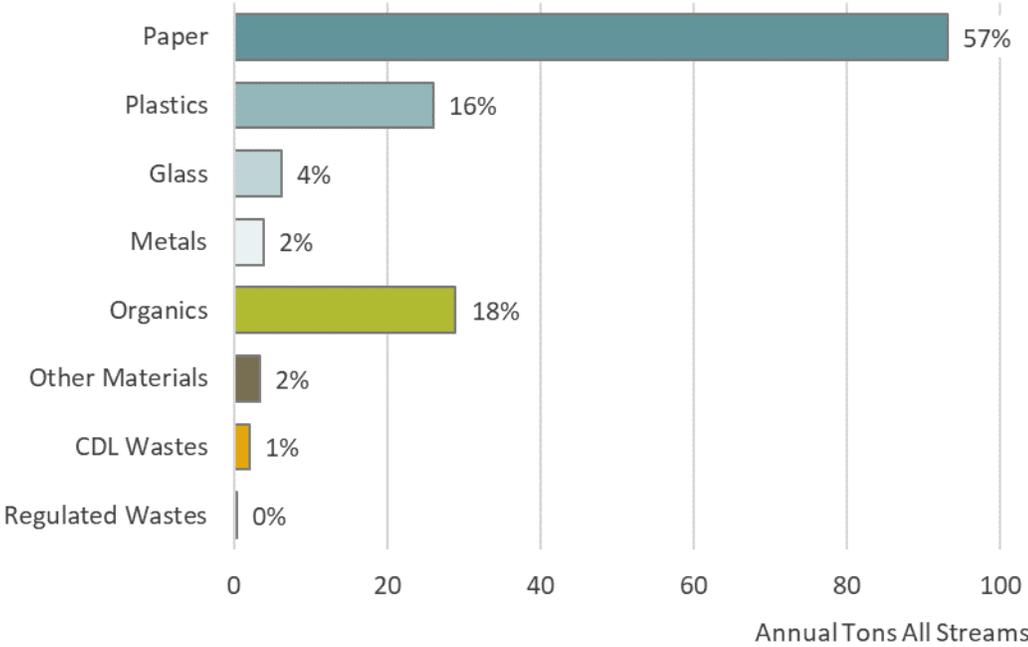
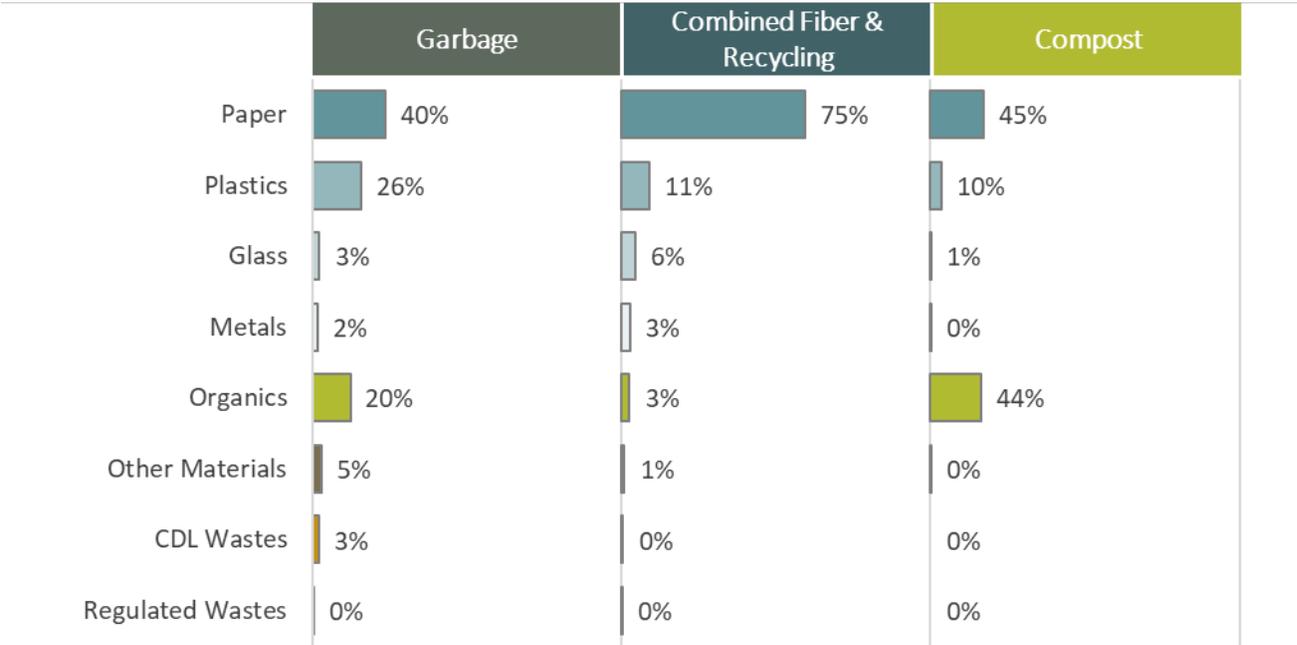


Figure 38 provides a more detailed look at material from arts and design buildings by material class. The figure presents the composition of each stream by material class, and the bar lengths reflect relative quantities of the material in each stream and overall. As shown in the figure below:

- ▶ Paper is the largest material class in garbage, accounting for 40 percent of the stream. The next largest material classes in garbage from arts and design buildings are plastics (26%) and organics (20%).
- ▶ Three-quarters of combined fiber and recycling from arts and design buildings is paper (75%), and a larger quantity of paper is recycled than is disposed of in either garbage or compost.
- ▶ Paper (45%) and organics (44%) are the most prevalent material classes in compost from arts and design buildings.

Figure 38. Annual Tons by Material Class and Stream: Arts and Design Buildings



Bars report annual tons and percentages report class composition for each stream.

Table 21 presents the top ten materials disposed of from arts and design buildings by weight across all studied streams, excluding combined fiber. As shown, the two most prevalent materials are *food* and *compostable/soiled paper*, together accounting for nearly half (45%) of all material from arts and design buildings. The next-most prevalent materials by weight are *mixed low-grade paper* (8% of material generated) and *plain OCC/Kraft paper* (6%). Only one of the ten most disposed of materials by weight—*other film*—is a non-recoverable material type.

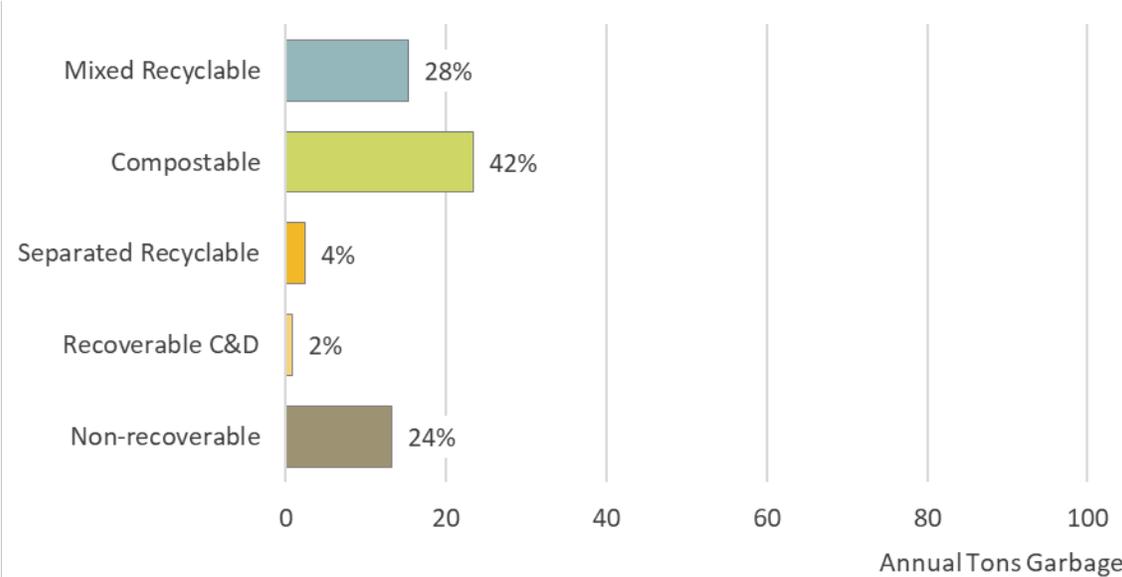
Table 21. Top Ten Material Types by Weight, All Streams: Arts and Design Buildings

| Material Type                                | Recoverability   | Est. Percent | Est. Tons  |
|--|------------------|--------------|------------|
| Food   | Compostable      | 23%          | 29         |
| Compostable/Soiled Paper                     | Compostable      | 22%          | 28         |
| Mixed Low-grade Paper                        | Mixed Recyclable | 8%           | 11         |
| Plain OCC/Kraft Paper                        | Mixed Recyclable | 6%           | 7          |
| Other Film                                   | Non-recoverable  | 5%           | 6          |
| Beverage Glass                               | Mixed Recyclable | 4%           | 5          |
| PET Bottles & Containers                     | Mixed Recyclable | 3%           | 4          |
| Compostable Single-use Food Service Plastics | Compostable      | 3%           | 4          |
| Polycoated/Aseptic Packaging                 | Mixed Recyclable | 3%           | 3          |
| Rigid Containers                             | Mixed Recyclable | 2%           | 3          |
| Top Ten Total                                |                  | 80%          | 101        |
| Remaining Recoverable                        |                  | 13%          | 16         |
| Remaining Non-recoverable                    |                  | 8%           | 10         |
| <b>Generation Annual Tons</b>                |                  | <b>100%</b>  | <b>126</b> |

## COMPOSITION RESULTS: ARTS AND DESIGN BUILDINGS GARBAGE

This section presents composition results for garbage from arts and design buildings. Figure 39 shows the composition of garbage from arts and design buildings by recoverability category. Over two-fifths (42%) of the stream is compostable, and another 28 percent is recoverable through recycling programs. Only approximately one-quarter (24%) of the garbage from arts and design buildings is non-recoverable.

Figure 39. Annual Tons by Recoverability Category: Arts and Design Buildings Garbage



As shown in Table 22, the three largest material types found in garbage from arts and design buildings are recoverable through compost or recycling and account for over half of the garbage stream. These materials are *compostable/soiled paper* (20%), *food* (20%), and *mixed low-grade paper* (12%). The next-most prevalent material in garbage from arts and design buildings is *other film* (11%), which is not recoverable.

Table 22. Top Ten Material Types by Weight: Arts and Design Buildings Garbage

| Material Type                                | Recoverability   | Est. Percent | Est. Tons |
|--|------------------|--------------|-----------|
| Compostable/Soiled Paper                     | Compostable      | 20%          | 11        |
| Food   | Compostable      | 20%          | 11        |
| Mixed Low-grade Paper                        | Mixed Recyclable | 12%          | 6         |
| Other Film                                   | Non-recoverable  | 11%          | 6         |
| Rigid Containers                             | Mixed Recyclable | 3%           | 2         |
| Compostable Single-use Food Service Plastics | Compostable      | 2%           | 1         |
| Beverage Glass                               | Mixed Recyclable | 2%           | 1         |
| PET Bottles & Containers                     | Mixed Recyclable | 2%           | 1         |
| Plain OCC/Kraft Paper                        | Mixed Recyclable | 2%           | 1         |
| High-grade Paper                             | Mixed Recyclable | 2%           | 1         |
| <b>Top Ten Total</b>                         |                  | <b>76%</b>   | <b>42</b> |
| Remaining Recoverable                        |                  | 11%          | 6         |
| Remaining Non-recoverable                    |                  | 13%          | 7         |
| <b>Garbage Annual Tons</b>                   |                  | <b>100%</b>  | <b>55</b> |

## COMPOSITION RESULTS: ARTS AND DESIGN BUILDINGS RECYCLING

This section presents composition findings for recycling from arts and design buildings. As shown in Figure 40 below, mixed recyclable material accounts for the majority of the stream, approximately 71 percent of recycling from arts and design buildings. The remaining material is not recoverable through the recycling stream.

Figure 40. Annual Tons by Recoverability Category: Arts and Design Buildings Recycling

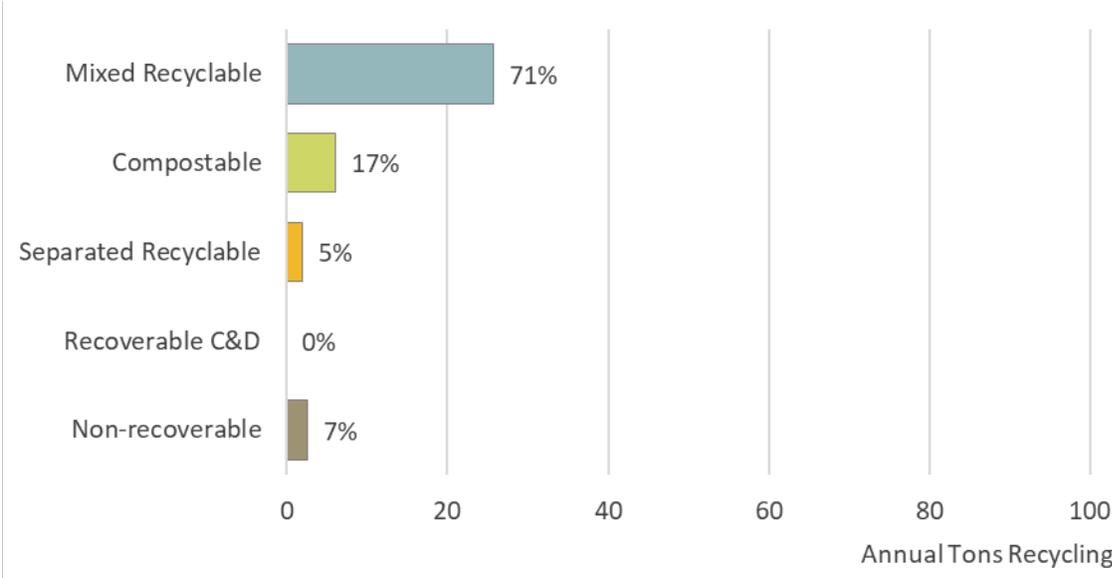


Table 23 lists the top ten contaminants by weight in recycling from arts and design buildings. The top three contaminants, *compostable/soiled paper* (8% of the stream), *food* (6%), and *other clean polyethylene film* (3%) together account for 17 percent of the stream.

Table 23. Top Ten Contaminants by Weight: Arts and Design Buildings Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons |
|--|----------------------|--------------|-----------|
| Compostable/Soiled Paper                     | Compostable          | 8%           | 3         |
| Food   | Compostable          | 6%           | 2         |
| Other Clean Polyethylene Film                | Separated Recyclable | 3%           | 1         |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable | 2%           | 1         |
| Compostable Single-use Food Service Plastics | Compostable          | 2%           | 1         |
| Other Film                                   | Non-recoverable      | 1%           | 0         |
| Fines & Miscellaneous                        | Non-recoverable      | 1%           | 0         |
| Other Plastic Products                       | Non-recoverable      | 1%           | 0         |
| Non-recoverable & Composite Paper            | Non-recoverable      | 1%           | 0         |
| Treated Wood                                 | Non-recoverable      | 1%           | 0         |
| Top Ten Total                                |                      | 25%          | 9         |
| Remaining Recoverable                        |                      | 4%           | 1         |
| Remaining Non-recoverable                    |                      | 71%          | 26        |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>36</b> |

## COMPOSITION RESULTS: ARTS AND DESIGN BUILDINGS COMPOST

This section summarizes key findings about the compost collected from arts and design buildings. Figure 41 shows the composition of compost from arts and design buildings by recoverability category. 92 percent is compostable, and the remaining 8 percent from other recoverability categories combined is considered contamination of the compost stream.

Figure 41. Annual Tons by Recoverability Category: Arts and Design Buildings Compost

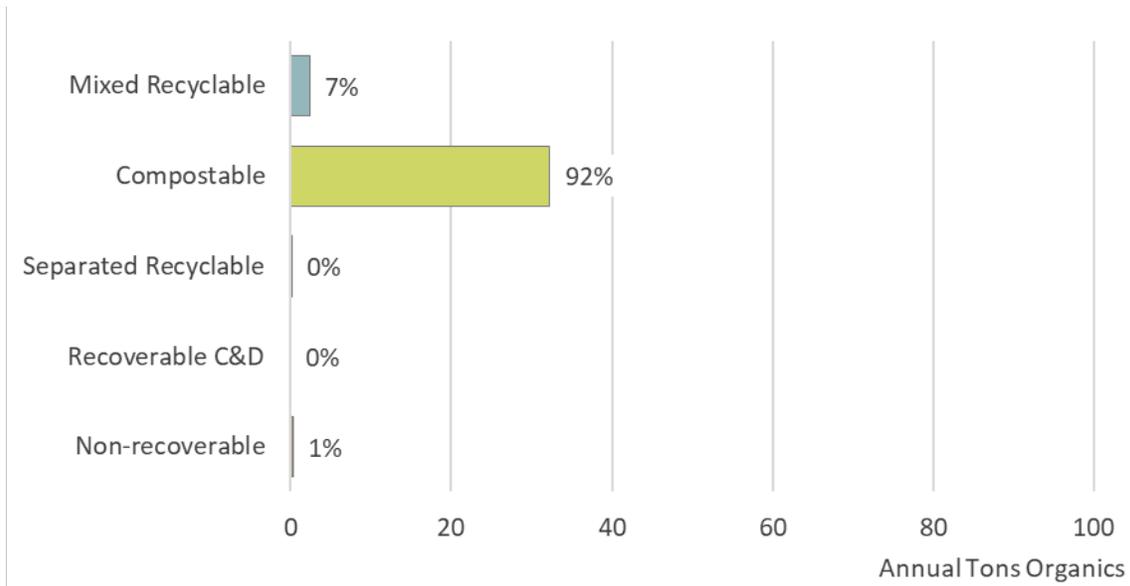


Table 24 provides more detail about contaminants in the compost stream, listing the top ten contaminants by weight. The top contaminant is *non-compostable single-use food service paper* (2%). Other common contaminants are *plain OCC/Kraft paper*, *mixed low-grade paper*, and *beverage glass*, each accounting for approximately 1 percent of material collected as compost from arts and design buildings.

Table 24. Top Ten Contaminants by Weight: Arts and Design Buildings Compost

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons |
|---|------------------|--------------|-----------|
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 2%           | 1         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable | 1%           | 1         |
| Mixed Low-grade Paper                         | Mixed Recyclable | 1%           | 0         |
| Beverage Glass                                | Mixed Recyclable | 1%           | 0         |
| PET Bottles & Containers                      | Mixed Recyclable | 1%           | 0         |
| High-grade Paper                              | Mixed Recyclable | 0.4%         | 0         |
| Rigid Containers                              | Mixed Recyclable | 0.4%         | 0         |
| Other Film                                    | Non-recoverable  | 0.4%         | 0         |
| Non-recoverable Rigid Packaging               | Non-recoverable  | 0.3%         | 0         |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable | 0.2%         | 0         |
| <b>Top Ten Total</b>                          |                  | <b>7%</b>    | <b>2</b>  |
| Remaining Recoverable                         |                  | 1%           | 0         |
| Remaining Non-recoverable                     |                  | 92%          | 32        |
| <b>Compost Annual Tons</b>                    |                  | <b>100%</b>  | <b>35</b> |

## OPPORTUNITIES

This section presents opportunities to increase recovery of materials from arts and design buildings. The figures in this section show the composition of garbage, combined fiber and recycling, and compost by recoverability category, capture rates by stream and recoverability category, and quantities of recovered and potentially recoverable materials.

Figure 42 presents the proportion of recyclable and compostable materials recovered across garbage, recycling, and compost streams from art buildings and their accompanying capture rates. As shown, the current recycling program collects the bulk of combined fiber and mixed recyclable paper generated by arts and design buildings, achieving a capture rate of 78 percent. Over half of the compostable material is captured as compost, but compostable material remains in the garbage and is the largest material by recoverability category by weight in the garbage.

Figure 42. Recoverability and Actual Disposal: Arts and Design Buildings

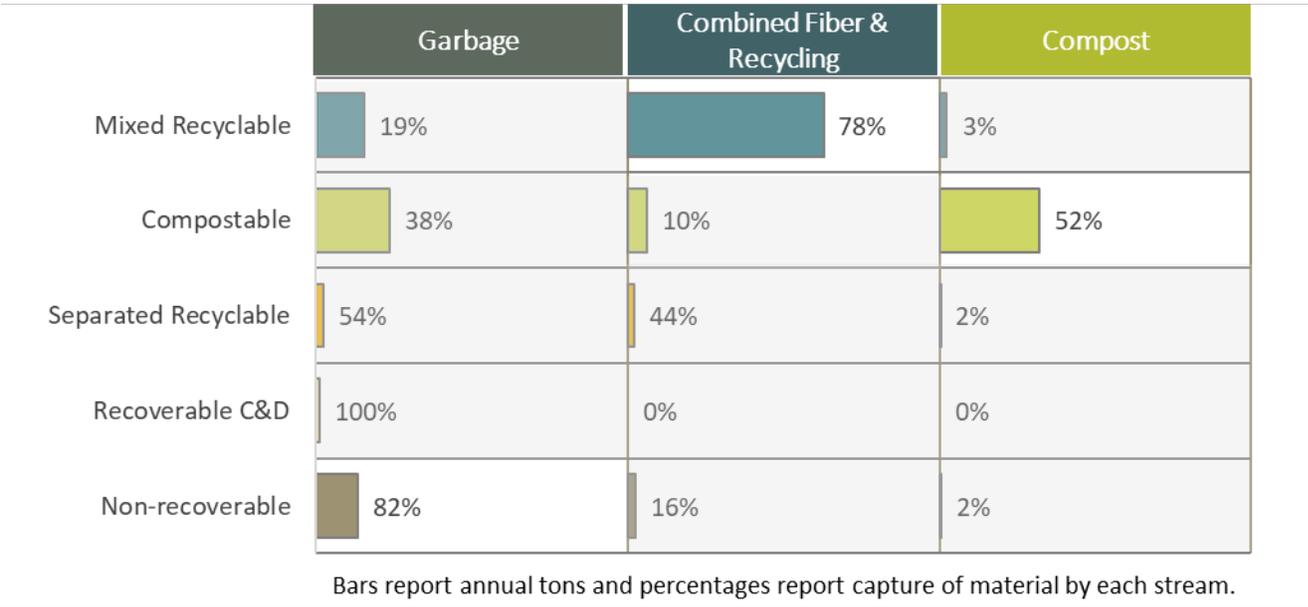


Table 25 provides a more detailed look at the quantities of recyclable and compostable material that are currently recovered but for which more material could be recovered if disposed to the appropriate recovery streams from arts and design buildings. The material types with the most remaining tons (not currently recovered) are *compostable/soiled paper, food, and recyclable paper & combined fiber*.

Table 25. Top Recoverable Material Types: Arts and Design Buildings

| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Compostable/Soiled Paper                     | Compostable      | 14             | 14             | 50%          |
| Food   | Compostable      | 15             | 13             | 54%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 52             | 12             | 81%          |
| Rigid Containers                             | Mixed Recyclable | 1              | 2              | 39%          |
| Compostable Single-use Food Service Plastics | Compostable      | 2              | 2              | 51%          |
| Beverage Glass                               | Mixed Recyclable | 4              | 1              | 74%          |
| PET Bottles & Containers                     | Mixed Recyclable | 3              | 1              | 70%          |
| Other Ferrous                                | Mixed Recyclable | 0              | 0              | 25%          |
| Aluminum Cans                                | Mixed Recyclable | 2              | 0              | 82%          |
| Other Untreated wood                         | Compostable      | 0              | 0              | 31%          |
| <b>Recyclable</b>                            |                  | <b>63</b>      | <b>18</b>      | <b>78%</b>   |
| <b>Compostable</b>                           |                  | <b>32</b>      | <b>29</b>      | <b>52%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>95</b>      | <b>47</b>      | <b>67%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Athletic and Recreation Facilities

This section describes the quantities and composition of material disposed in the garbage, recycling, combined fiber, and compost streams from athletic and recreation facilities. Athletic and recreation facilities include both indoor and outdoor complexes; examples of athletic and recreation facilities include Husky Stadium and Conibear Shellhouse. The map below shows all locations of collection containers for garbage, recycling, and compost from athletic and recreation facilities.

Figure 43. Garbage, Recycling, and Compost Collection Locations: Athletic and Recreation Facilities

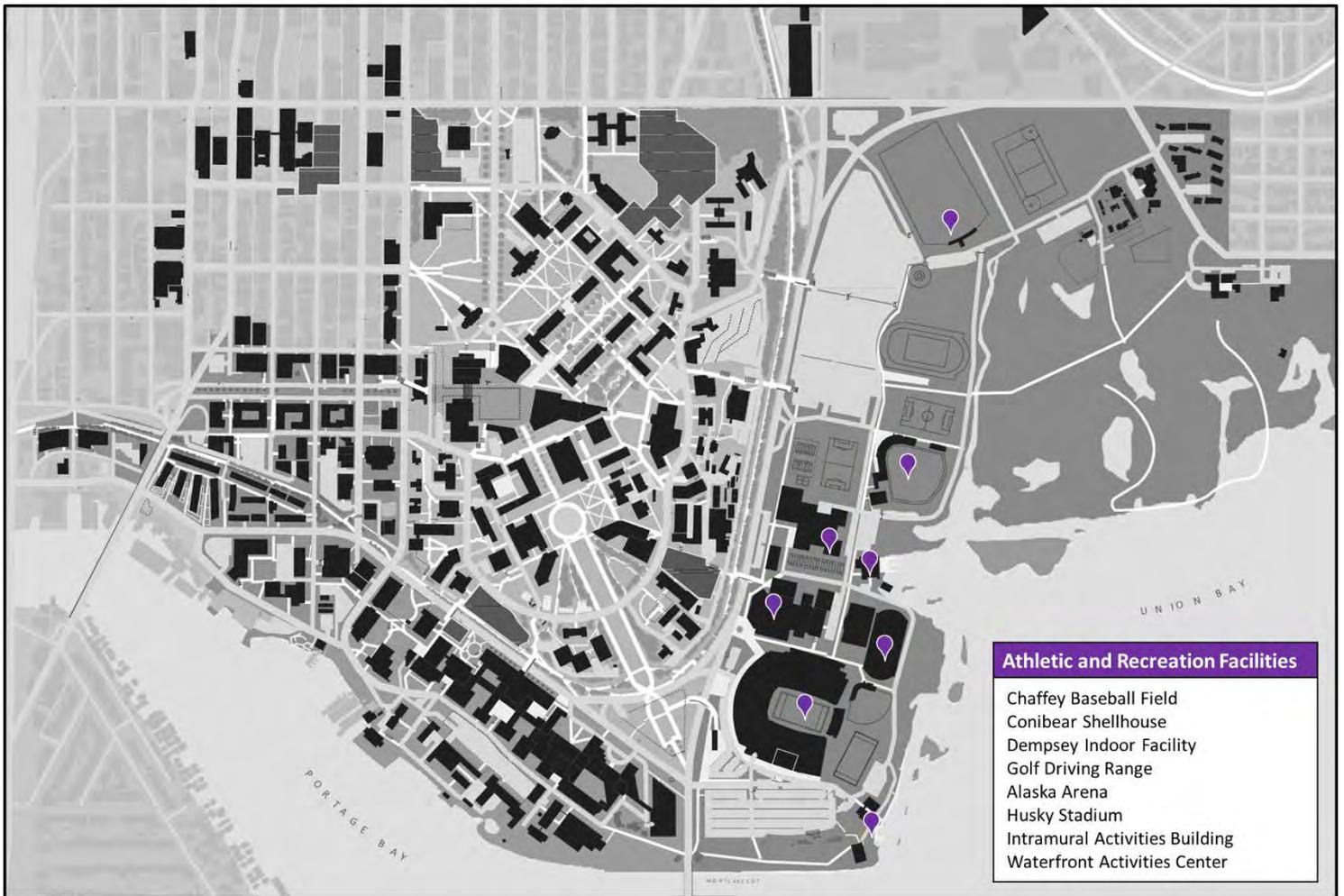


Figure 44 shows the composition of generation from athletic and recreation facilities by stream. During the baseline period for this study, athletic and recreation facilities generated 379 tons of material and achieved a recovery rate of 65 percent. This generator group has the fourth-highest recovery rate on campus.

Garbage disposal from athletic and recreation facilities decreased by 79 percent since the 2003 study, from 619 tons to 132 tons of garbage.

Figure 44. Annual Tons by Stream: Athletic and Recreation Facilities

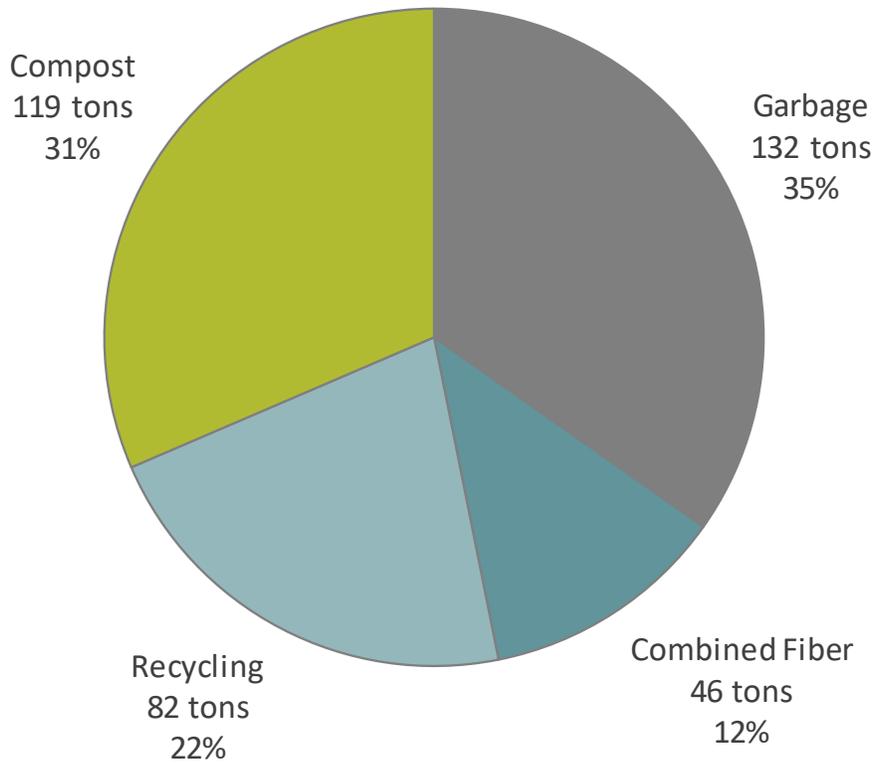
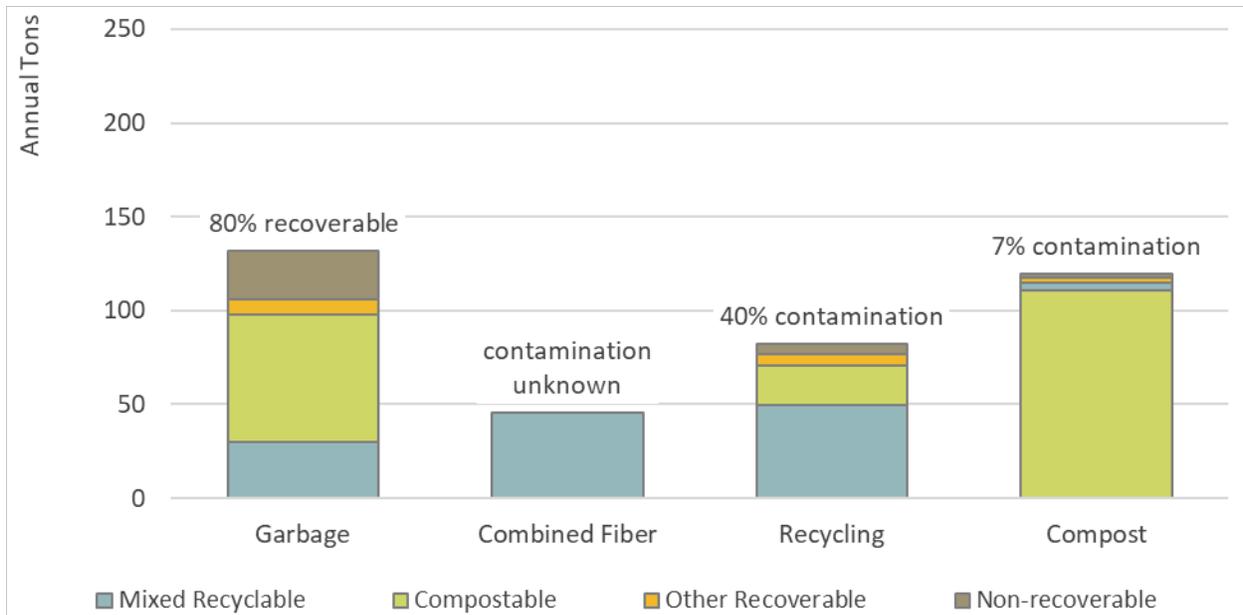


Figure 45 provides more detail about the recoverability or contamination of each stream. Approximately four-fifths (80%) of garbage from athletic and recreation facilities is recoverable, the largest portion of which is compostable material. There is also a large quantity of compostable material in the recycling stream, contributing to a recycling contamination rate of 40 percent. This contamination is higher than the recycling contamination rate for campus-wide material. Athletic and recreation facilities have more recoverable material in the garbage than any other generator group included in this study, as well as the highest rate of contamination in its recycling stream.

Figure 45. Recoverability and Contamination by Stream: Athletic and Recreation Facilities



*The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.*

The quantities and percentage of material disposed in garbage, recycling, combined fiber, and compost streams from athletic and recreation facilities by material class is shown in Figure 46. The two largest material classes generated by athletic and recreation facilities by weight are paper (40%) and organics (35%). Plastics (17%) are also among the largest material classes in this generator group.

Figure 46. Annual Tons by Material Class, All Streams: Athletic and Recreation Facilities

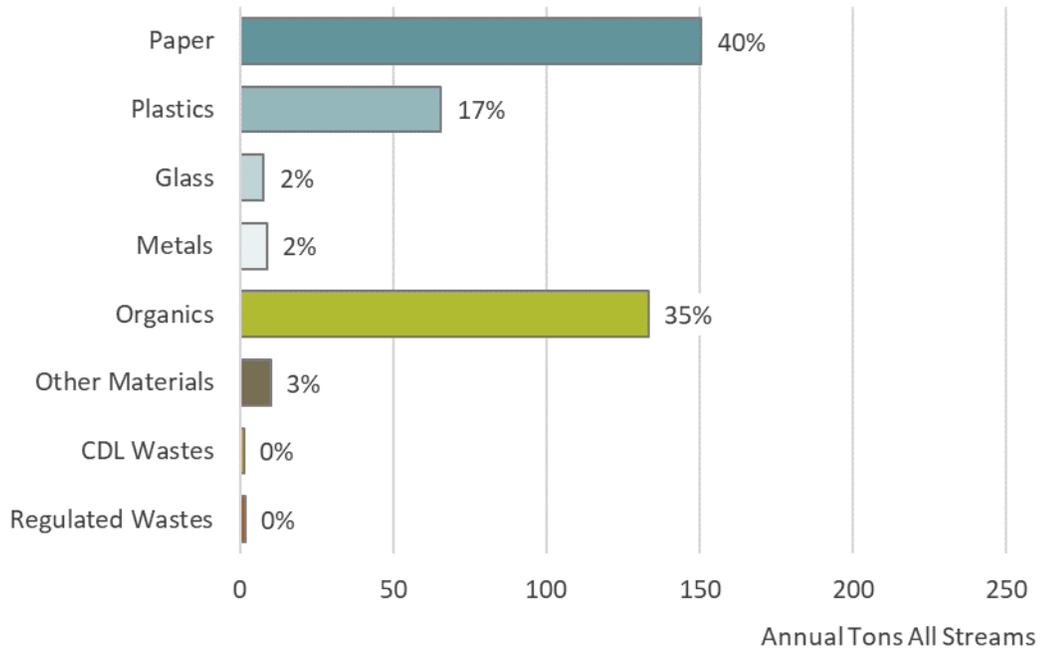
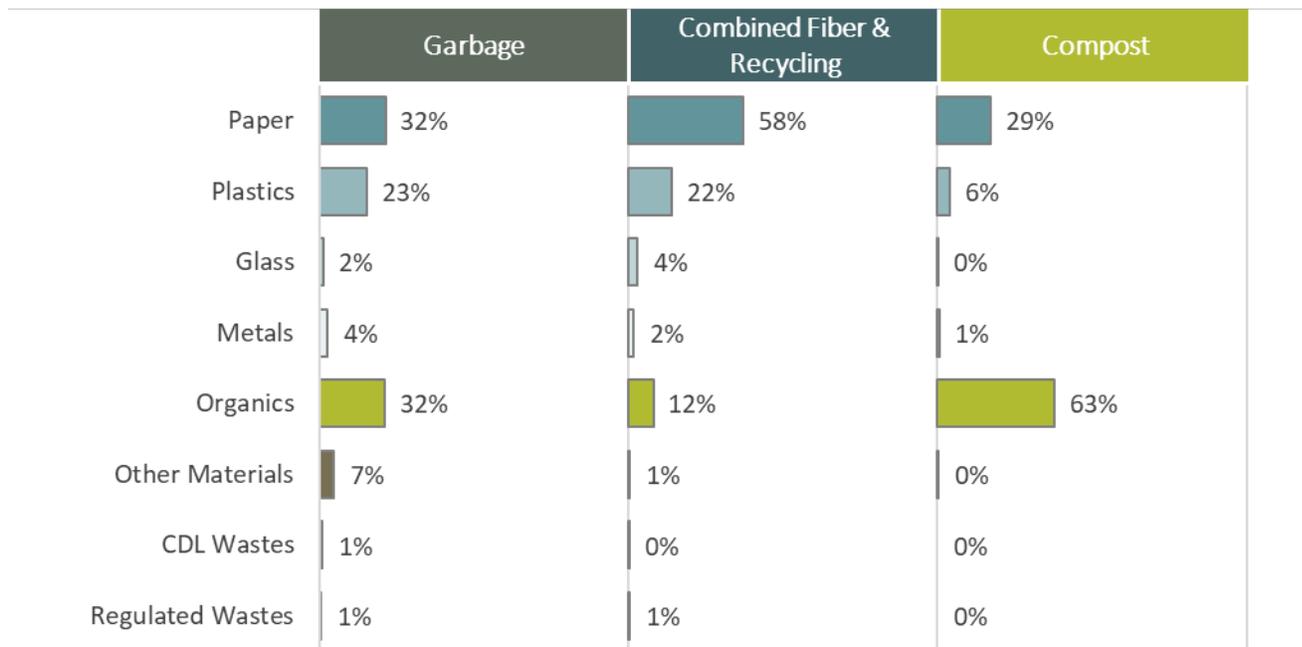


Figure 47 shows more detail about materials generated by athletic and recreation facilities by material class, further breaking out the analysis by stream. The bar lengths reflect the relative quantities of material. As shown, organics, plastics, and paper are the largest material classes in each stream. Specifically:

- ▶ Organics and paper are the largest material classes in garbage, each accounting for nearly one-third (32%) of the stream.
- ▶ 58 percent of the combined fiber and recycling streams is paper, and another one-fifth (22%) of combined fiber and recycling is plastics.
- ▶ Organics (63%) and paper (29%) are the most prevalent material classes in compost.

Figure 47. Annual Tons by Material Class and Stream: Athletic and Recreation Facilities



Bars report annual tons and percentages report class composition for each stream.

The top ten material types by weight across all streams from athletic and recreation facilities are presented in Table 26, excluding the combined fiber stream. The top two material types, *food* and *compostable/soiled paper*, represent more than half (56%) of all material generated by weight. A larger portion of material generated by athletic and recreation facilities was food compared to all other generator groups. Only one non-recoverable material type is in the top ten material types generated by weight, *other film* (4%).

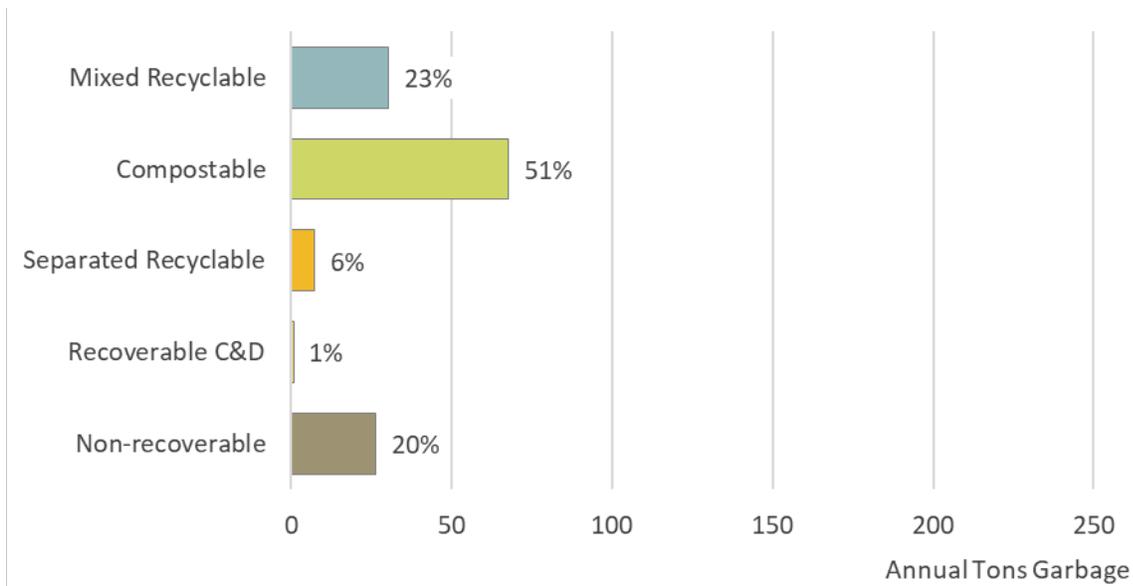
Table 26. Top Ten Material Types by Weight, All Streams: Athletic and Recreation Facilities

| Material Type                 | Recoverability       | Est. Percent | Est. Tons  |
|-------------------------------|----------------------|--------------|------------|
| Food                          | Compostable          | 38%          | 126        |
| Compostable/Soiled Paper      | Compostable          | 18%          | 60         |
| Mixed Low-grade Paper         | Mixed Recyclable     | 5%           | 16         |
| PET Bottles & Containers      | Mixed Recyclable     | 5%           | 16         |
| Other Film                    | Non-recoverable      | 4%           | 12         |
| Plain OCC/Kraft Paper         | Mixed Recyclable     | 3%           | 10         |
| Beverage Glass                | Mixed Recyclable     | 2%           | 7          |
| High-grade Paper              | Mixed Recyclable     | 2%           | 6          |
| Rigid Containers              | Mixed Recyclable     | 2%           | 6          |
| Other Clean Polyethylene Film | Separated Recyclable | 2%           | 6          |
| Top Ten Total                 |                      | 80%          | 265        |
| Remaining Recoverable         |                      | 14%          | 47         |
| Remaining Non-recoverable     |                      | 6%           | 21         |
| <b>Generation Annual Tons</b> |                      | <b>100%</b>  | <b>333</b> |

## COMPOSITION RESULTS: ATHLETIC AND RECREATION FACILITIES GARBAGE

This section presents findings on the quantities and composition of garbage from athletic and recreation facilities. As shown below in Figure 48, over half (51%) of garbage from athletic and recreation facilities is compostable. Nearly an additional one-quarter (23%) of material in the garbage is mixed recyclable material.

Figure 48. Annual Tons by Recoverability Category: Athletic and Recreation Facilities Garbage



The top ten material types found in garbage from athletic and recreation facilities are listed below in Table 27. *Food* and *compostable/soiled paper* are the top two material types in garbage from athletic and recreation facilities by weight, together accounting for nearly half (49%) of the stream. Other prevalent material types include *other film* (9%) and *mixed low-grade paper* (6%).

Table 27. Top Ten Material Types by Weight: Athletic and Recreation Facilities Garbage

| Material Type                 | Recoverability       | Est. Percent | Est. Tons  |
|-------------------------------|----------------------|--------------|------------|
| Food                          | Compostable          | 31%          | 41         |
| Compostable/Soiled Paper      | Compostable          | 18%          | 24         |
| Other Film                    | Non-recoverable      | 9%           | 11         |
| Mixed Low-grade Paper         | Mixed Recyclable     | 6%           | 8          |
| Rigid Containers              | Mixed Recyclable     | 3%           | 4          |
| PET Bottles & Containers      | Mixed Recyclable     | 3%           | 3          |
| Plain OCC/Kraft Paper         | Mixed Recyclable     | 2%           | 3          |
| High-grade Paper              | Mixed Recyclable     | 2%           | 3          |
| Textiles                      | Separated Recyclable | 2%           | 3          |
| Other Clean Polyethylene Film | Separated Recyclable | 2%           | 2          |
| Top Ten Total                 |                      | 77%          | 102        |
| Remaining Recoverable         |                      | 11%          | 15         |
| Remaining Non-recoverable     |                      | 11%          | 15         |
| <b>Garbage Annual Tons</b>    |                      | <b>100%</b>  | <b>132</b> |

## COMPOSITION RESULTS: ATHLETIC AND RECREATION FACILITIES RECYCLING

This section summarizes composition results for recycling from athletic and recreation facilities. Figure 49 shows the composition of this stream by recoverability category. As shown, three-fifths (60%) of the recycling stream is mixed recyclable material. The remaining 40 percent of the material is contamination, primarily compostable material.

Figure 49. Annual Tons by Recoverability Category: Athletic and Recreation Facilities Recycling

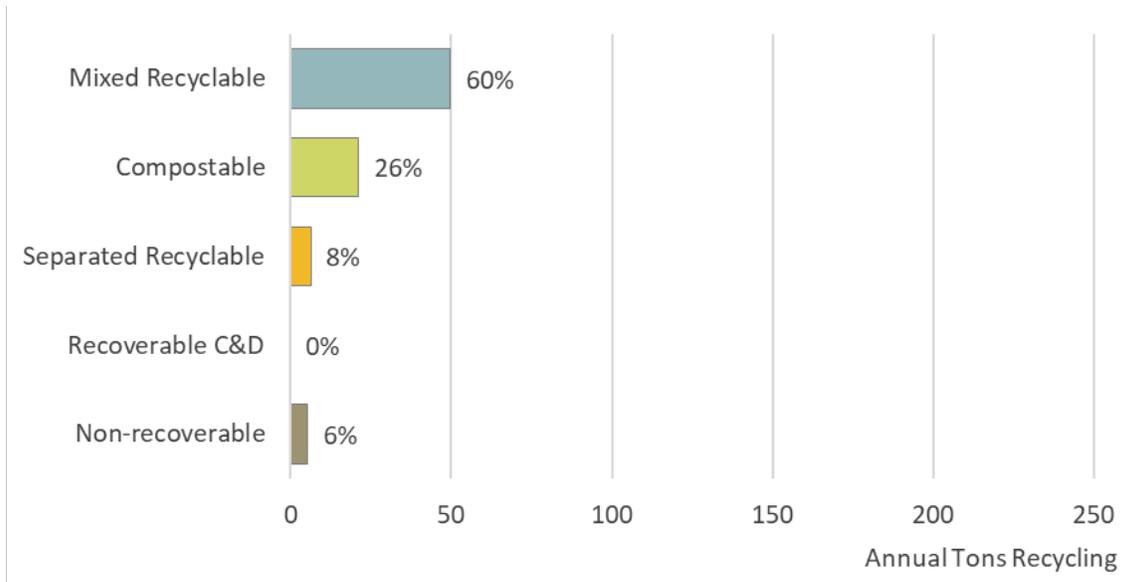


Table 28 presents the top contaminants by weight in recycling from athletic and recreation facilities. *Food* is the largest contaminant in recycling, accounting for nearly one-fifth (19%) of the stream. Other common contaminants are *compostable/soiled paper* (5%) and *loose clean shopping bags/dry cleaner bags* (5%).

Table 28. Top Ten Contaminants by Weight: Athletic and Recreation Facilities Recycling

| Material Type                         | Recoverability       | Est. Percent | Est. Tons |
|---------------------------------------|----------------------|--------------|-----------|
| Food                                  | Compostable          | 19%          | 16        |
| Compostable/Soiled Paper              | Compostable          | 5%           | 4         |
| Loose Clean Shopping/Dry Cleaner Bags | Separated Recyclable | 5%           | 4         |
| Other Clean Polyethylene Film         | Separated Recyclable | 2%           | 2         |
| Other Plastic Products                | Non-recoverable      | 2%           | 2         |
| Other Chemical Waste                  | Non-recoverable      | 1%           | 1         |
| Other Film                            | Non-recoverable      | 1%           | 1         |
| Non-recoverable Rigid Packaging       | Non-recoverable      | 1%           | 1         |
| Non-recoverable & Composite Paper     | Non-recoverable      | 1%           | 1         |
| Compostable Bags                      | Compostable          | 1%           | 1         |
| <b>Top Ten Total</b>                  |                      | <b>37%</b>   | <b>31</b> |
| Remaining Recoverable                 |                      | 3%           | 2         |
| Remaining Non-recoverable             |                      | 60%          | 49        |
| <b>Recycling Annual Tons</b>          |                      | <b>100%</b>  | <b>82</b> |

## COMPOSITION RESULTS: ATHLETIC AND RECREATION FACILITIES COMPOST

This section summarizes composition results for the compost stream from athletic and recreation facilities. Figure 50 presents the composition of this stream by recoverability category. As shown, 93 percent of compost from athletic and recreation facilities is compostable. The remaining 7 percent is contamination, primarily mixed recyclable material.

Figure 50. Annual Tons by Recoverability Category: Athletic and Recreation Facilities Compost

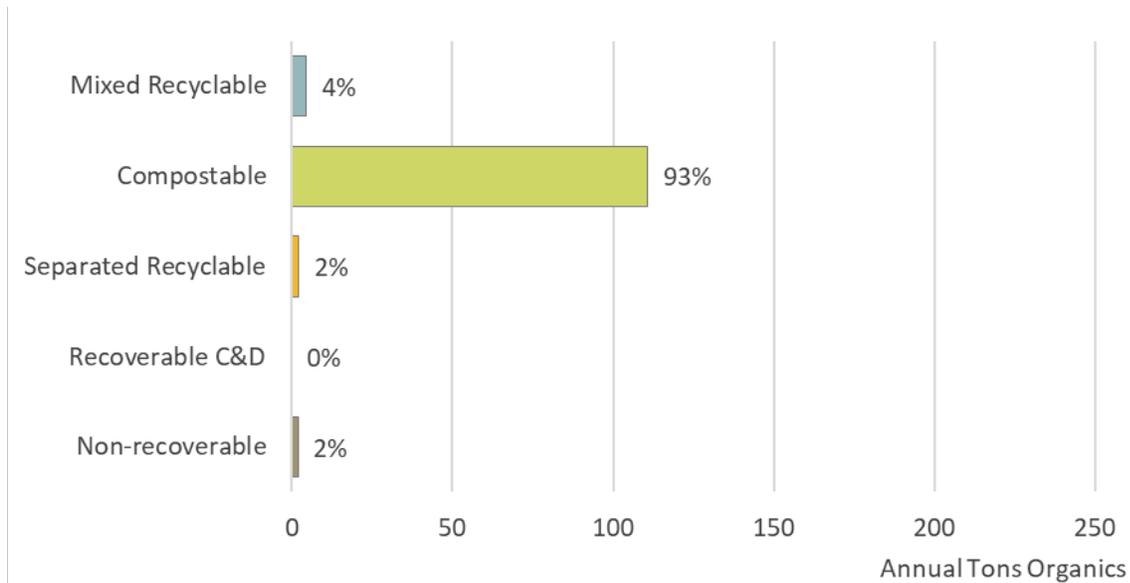


Table 29 provides a closer look at contaminants in the compost stream from athletic and recreation facilities, listing the top ten contaminant materials by weight. The top contaminants are *other clean polyethylene film*, *latex/nitrile gloves*, *other single-use aluminum*, and *mixed low-grade paper*, each approximately 1 percent of the stream.

Table 29. Top Ten Contaminants by Weight: Athletic and Recreation Facilities Compost

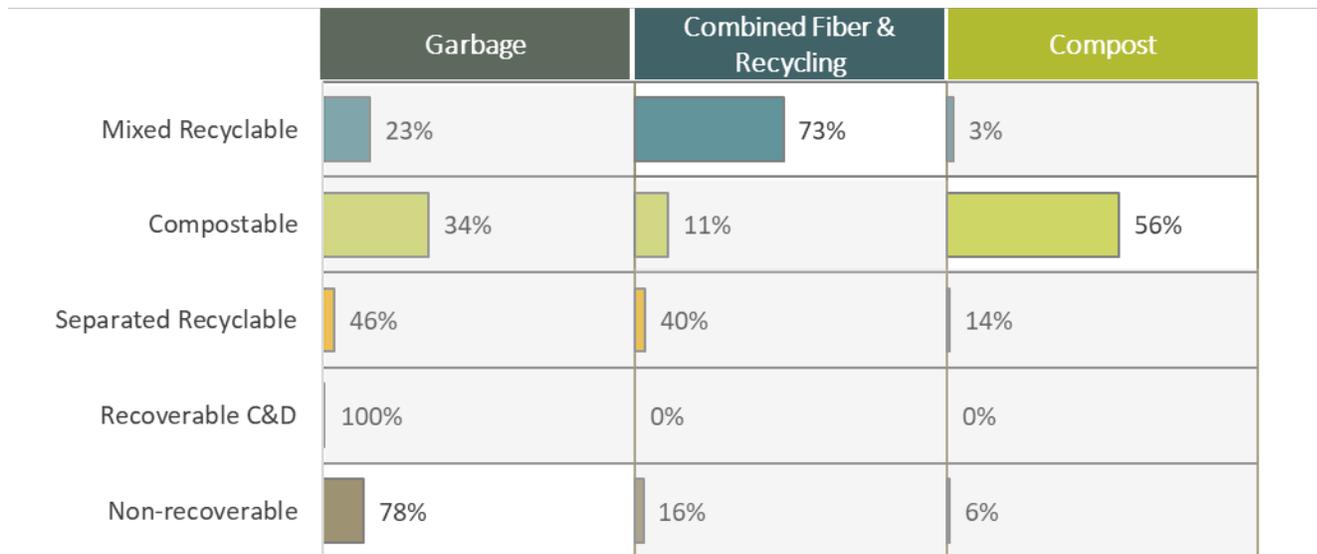
| Material Type                                 | Recoverability       | Est. Percent | Est. Tons  |
|---|----------------------|--------------|------------|
| Other Clean Polyethylene Film                 | Separated Recyclable | 1%           | 1          |
| Latex/Nitrile Gloves                          | Non-recoverable      | 1%           | 1          |
| Other Single-use Aluminum                     | Mixed Recyclable     | 1%           | 1          |
| Mixed Low-grade Paper                         | Mixed Recyclable     | 1%           | 1          |
| Rigid Containers                              | Mixed Recyclable     | 0.5%         | 1          |
| PET Bottles & Containers                      | Mixed Recyclable     | 0.5%         | 1          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable     | 0.4%         | 0          |
| Textiles                                      | Separated Recyclable | 0.4%         | 0          |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable     | 0.3%         | 0          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable     | 0.3%         | 0          |
| Top Ten Total                                 |                      | 6%           | 7          |
| Remaining Recoverable                         |                      | 1%           | 2          |
| Remaining Non-recoverable                     |                      | 93%          | 111        |
| <b>Compost Annual Tons</b>                    |                      | <b>100%</b>  | <b>119</b> |

## OPPORTUNITIES

This section discusses opportunities to increase the recovery rate from athletic and recreation facilities, highlighting capture rates for recoverable materials and the material types representing the most remaining recoverable tons that have not yet been recovered through recycling or compost.

The bar lengths in Figure 51 show the relative quantities of material generated by athletic and recreation facilities by recoverability category and stream. The percentages reflect the capture rates by recoverability category. For each stream, the white background shown in selected cells in the figure indicates the correct disposal method for the material. As shown, most combined fiber and mixed recyclable material generated by athletic and recreation facilities is recycled, with a capture rate of 73 percent. Similarly, most compostable material that is disposed is composted, but the capture rate of 56 percent indicates that nearly half of the material is landfilled (through garbage) or contaminating the recycling stream.

Figure 51. Recoverability and Actual Disposal: Athletic and Recreation Facilities



Bars report annual tons and percentages report capture of material by each stream.

Table 30 lists the recoverable materials with the most tons remaining for recovery from athletic and recreation facilities. As shown, food is the material with the most tons remaining for recovery—57 tons remain in garbage or recycling streams that could instead be captured for recovery as compost. Other materials with high recovery potential include *compostable/soiled paper* and *recyclable & combined fiber*.

Table 30. Top Recoverable Material Types: Athletic and Recreation Facilities

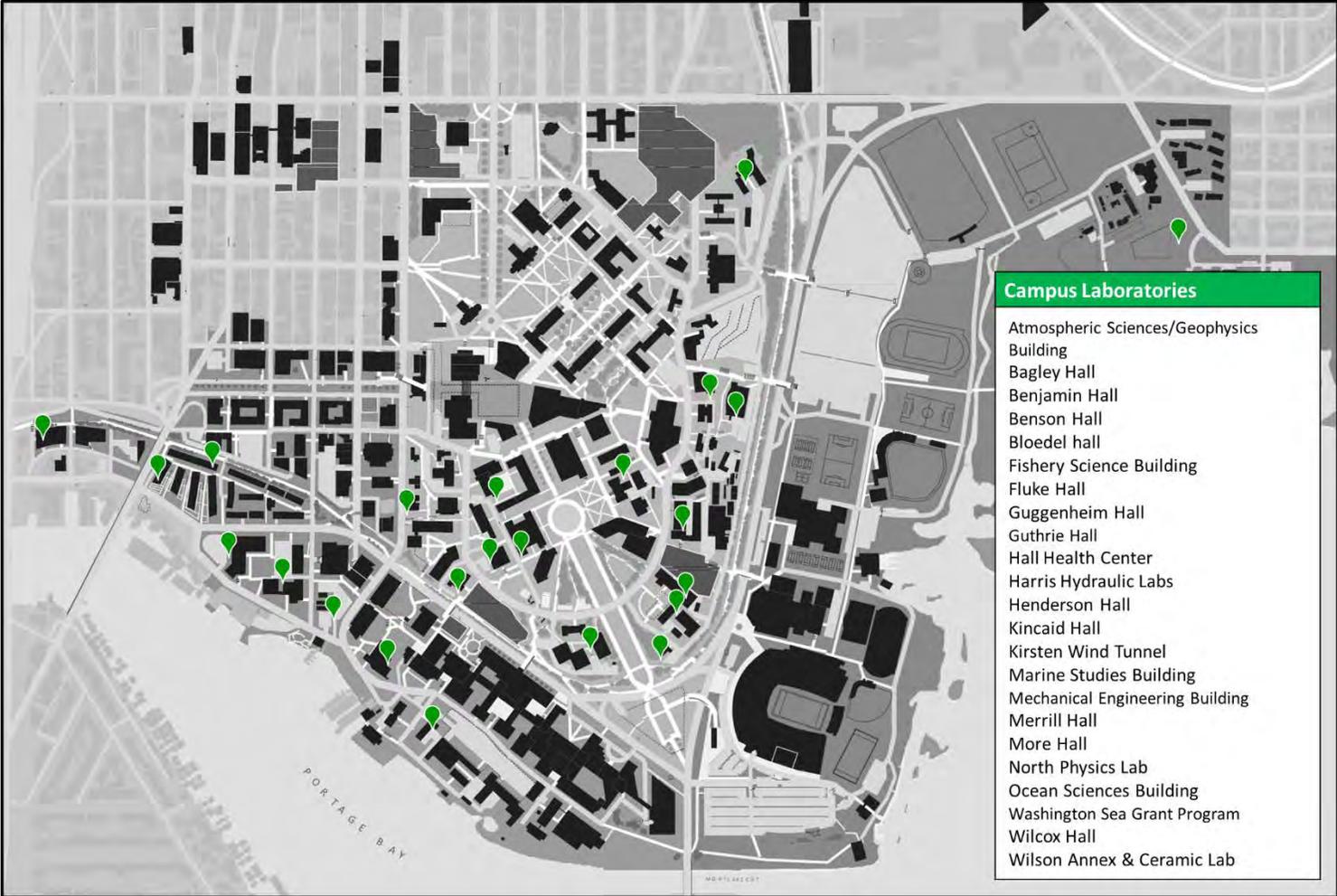
| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Food   | Compostable      | 69             | 57             | 55%          |
| Compostable/Soiled Paper                     | Compostable      | 32             | 28             | 53%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 69             | 19             | 79%          |
| #3-7 Packaging                               | Mixed Recyclable | 2              | 4              | 32%          |
| PET Bottles & Containers                     | Mixed Recyclable | 12             | 4              | 75%          |
| Beverage Glass                               | Mixed Recyclable | 5              | 2              | 71%          |
| Compostable Single-use Food Service Plastics | Compostable      | 1              | 2              | 36%          |
| Other Ferrous                                | Mixed Recyclable | 0              | 2              | 1%           |
| Other Single-use Aluminum                    | Mixed Recyclable | 0              | 2              | 10%          |
| Compostable Bags                             | Compostable      | 2              | 1              | 68%          |
| <b>Recyclable</b>                            |                  | <b>95</b>      | <b>35</b>      | <b>73%</b>   |
| <b>Compostable</b>                           |                  | <b>111</b>     | <b>89</b>      | <b>56%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>206</b>     | <b>123</b>     | <b>63%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Campus Laboratories

This section presents the quantities and composition of material disposed of in the garbage, recycling, combined fiber, and compost streams by campus laboratories. Campus laboratories are primarily science and engineering laboratories, and this generator group excludes material collected from laboratories from Magnuson Health Sciences Center or UW Medical Center. The map below shows all locations of collection containers for garbage, recycling, and compost from this generator group.

Figure 52. Garbage, Recycling, and Compost Collection Locations: Campus Laboratories



Campus laboratories disposed of 590 tons of garbage, recycling, combined fiber, and compost annually, achieving a 53 percent recovery rate. The composition and quantities of material generated by campus laboratories by stream are shown in Figure 54.

Garbage disposal from campus laboratories decreased by 39 percent since 2003, from 448 to 275 tons.

Figure 53. Annual Tons by Stream: Campus Laboratories

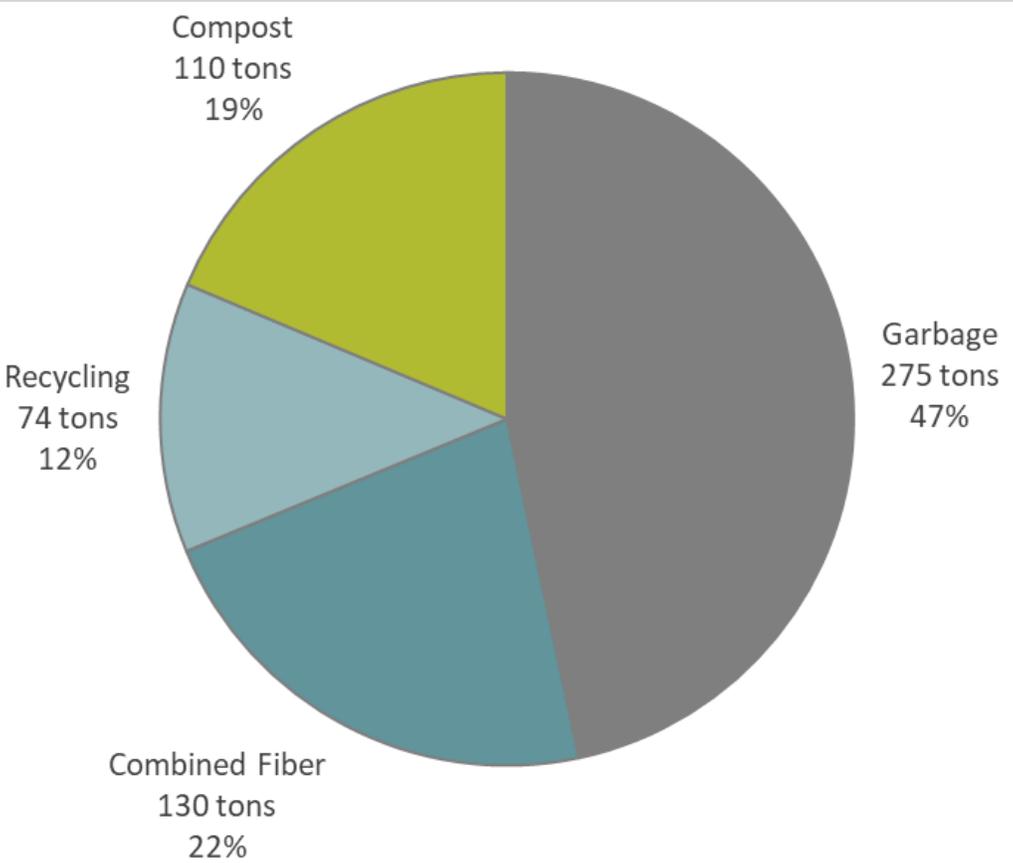
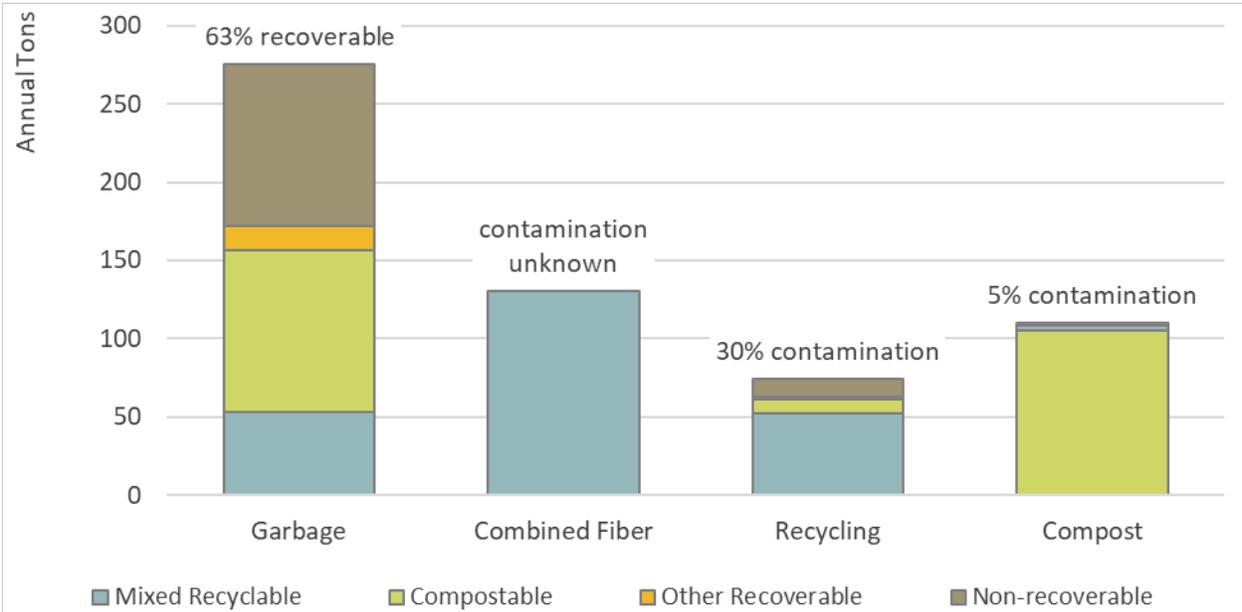


Figure 54 shows the quantity and percentage of material in garbage from campus laboratories that is recoverable, as well as the quantities and percentages of contaminant material in the recovery streams (combined fiber, recycling, and compost). Over three-fifths (63%) of garbage from campus laboratories is recoverable, and nearly one-third (30%) of recycling is contamination. This recycling contamination rate is higher than the overall campus-wide recycling contamination rate (26%). Compost contamination from campus laboratories is lower than overall campus-wide compost stream contamination (5% in laboratories vs. 8% overall). Campus laboratories and health sciences both have the second-lowest contamination rates for compost, second only to residence halls.

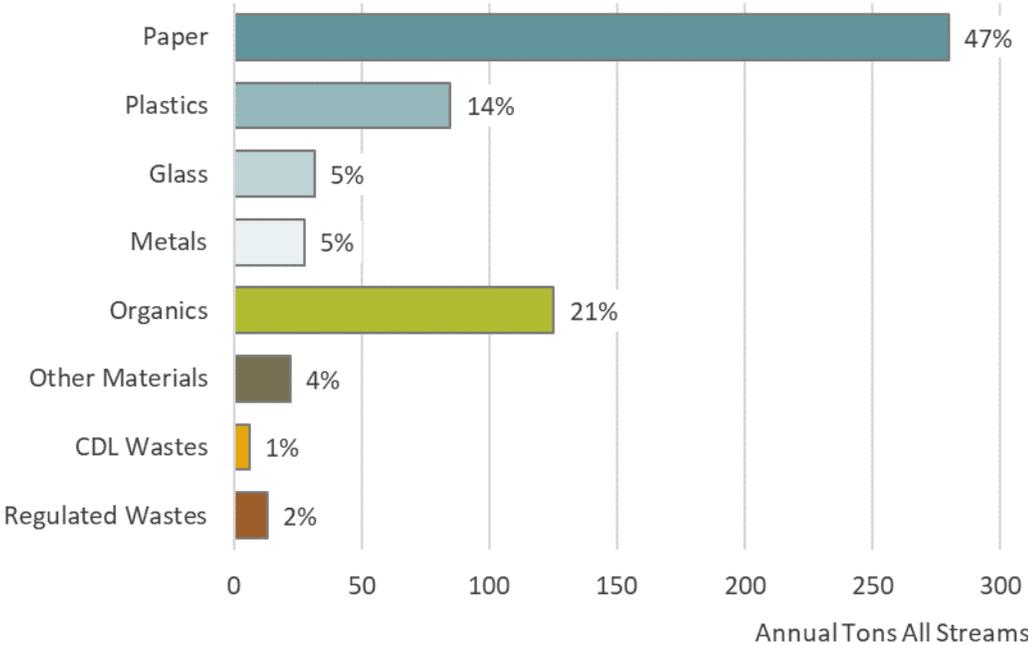
Figure 54. Recoverability and Contamination by Stream: Campus Laboratories



*The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.*

Figure 55 shows the tonnages and corresponding percentage of material from all streams from campus laboratories. The data shown include all material disposed of in the garbage, recycling, combined fiber, and compost streams. Campus laboratories generate primarily paper (47%), organics (21%), and plastics (14%).

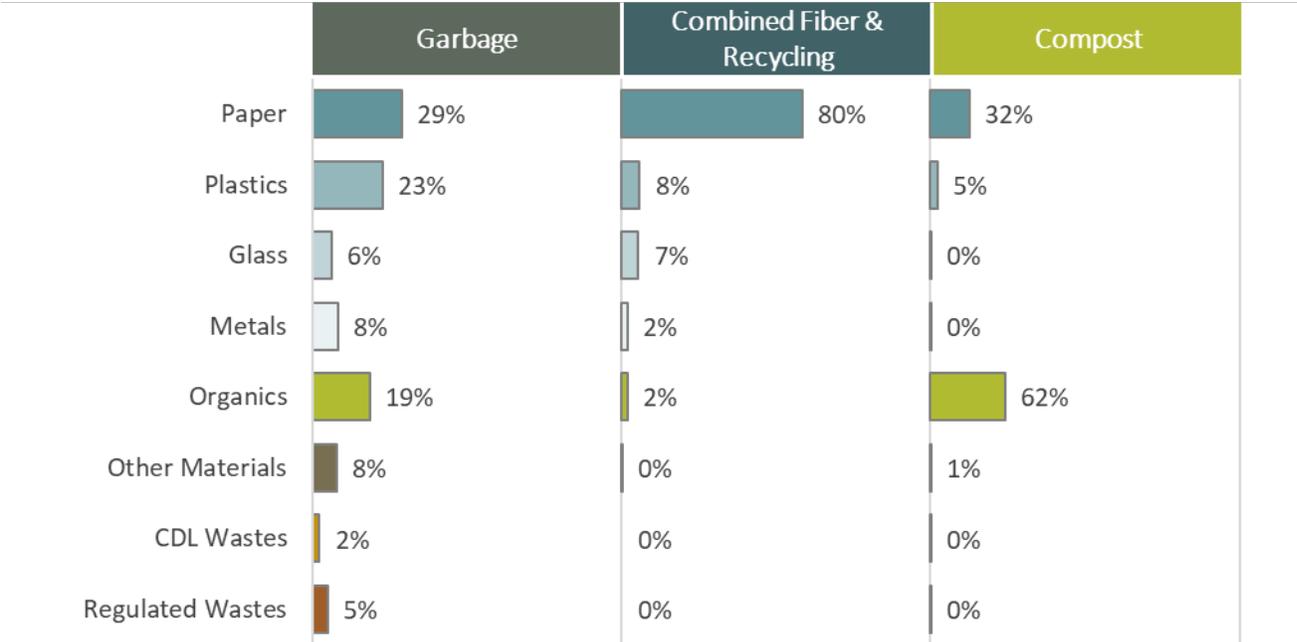
Figure 55. Annual Tons by Material Class, All Streams: Campus Laboratories



The figure below (Figure 56) shows the relative tonnages of each material class by stream and the percent composition of each stream by material class for campus laboratories.

- ▶ Paper (29%), plastics (23%), and organics (19%) are the largest material classes in garbage, together representing approximately 71 percent of the stream.
- ▶ Approximately four-fifths (80%) of the combined fiber and recycling streams is paper.
- ▶ Organics (62%) and paper (32%) are the largest material classes in the compost stream.

Figure 56. Annual Tons by Material Class and Stream: Campus Laboratories



Bars report annual tons and percentages report class composition for each stream.

Table 31 provides a more detailed look at the types of material generated by campus laboratories, excluding the combined fiber stream. It lists the top ten materials in all streams by weight. Taken together, *food* and *compostable/soiled paper* are over two-fifths (43%) of materials from campus laboratories. Other prevalent materials are *mixed low-grade paper* (6%) and *other film* (5%). Compared to other generator groups in the study, campus laboratories have more non-recoverable materials in the top ten material types generated, such as *lab glass* and *latex/nitrile gloves*.

**Table 31. Top Ten Material Types by Weight, All Streams: Campus Laboratories**

| <b>Material Type</b>              | <b>Recoverability</b> | <b>Est. Percent</b> | <b>Est. Tons</b> |
|-----------------------------------|-----------------------|---------------------|------------------|
| Food                              | Compostable           | 25%                 | 117              |
| Compostable/Soiled Paper          | Compostable           | 18%                 | 83               |
| Mixed Low-grade Paper             | Mixed Recyclable      | 6%                  | 30               |
| Other Film                        | Non-recoverable       | 5%                  | 23               |
| Beverage Glass                    | Mixed Recyclable      | 3%                  | 16               |
| Lab Glass                         | Non-recoverable       | 3%                  | 13               |
| Non-recoverable & Composite Paper | Non-recoverable       | 3%                  | 12               |
| PET Bottles & Containers          | Mixed Recyclable      | 2%                  | 10               |
| Latex/Nitrile Gloves              | Non-recoverable       | 2%                  | 10               |
| Other Plastic Products            | Non-recoverable       | 2%                  | 10               |
| <b>Top Ten Total</b>              |                       | <b>70%</b>          | <b>323</b>       |
| Remaining Recoverable             |                       | 19%                 | 88               |
| Remaining Non-recoverable         |                       | 11%                 | 49               |
| <b>Generation Annual Tons</b>     |                       | <b>100%</b>         | <b>460</b>       |

## COMPOSITION RESULTS: CAMPUS LABORATORIES GARBAGE

This section provides composition results for garbage from campus laboratories. Figure 57 shows the composition of garbage from campus laboratories by recoverability category. As shown, 57 percent of garbage from this generator group are recoverable through compost or recycling.

Figure 57. Annual Tons by Recoverability Category: Campus Laboratories Garbage

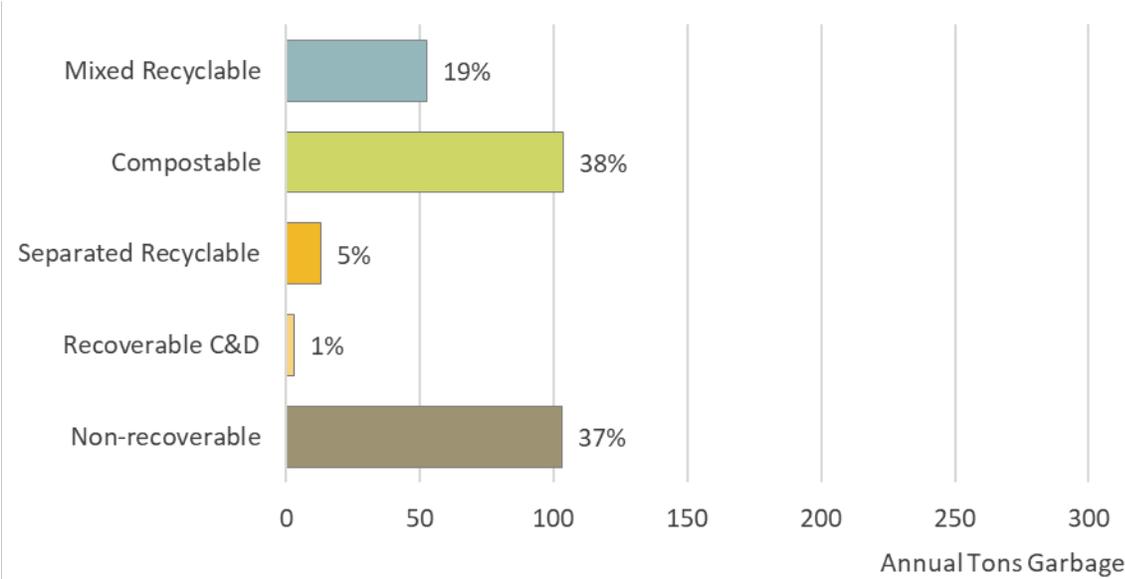


Table 32 lists the ten most prevalent material types by weight in the garbage from campus laboratories. The two most prevalent materials are *compostable/soiled paper* (18%) and *food* (16%), which together account for over one-third of the stream and are recoverable through composting. *Other film* is the next-most prevalent material in garbage from campus laboratories, accounting for nearly 8 percent of the stream.

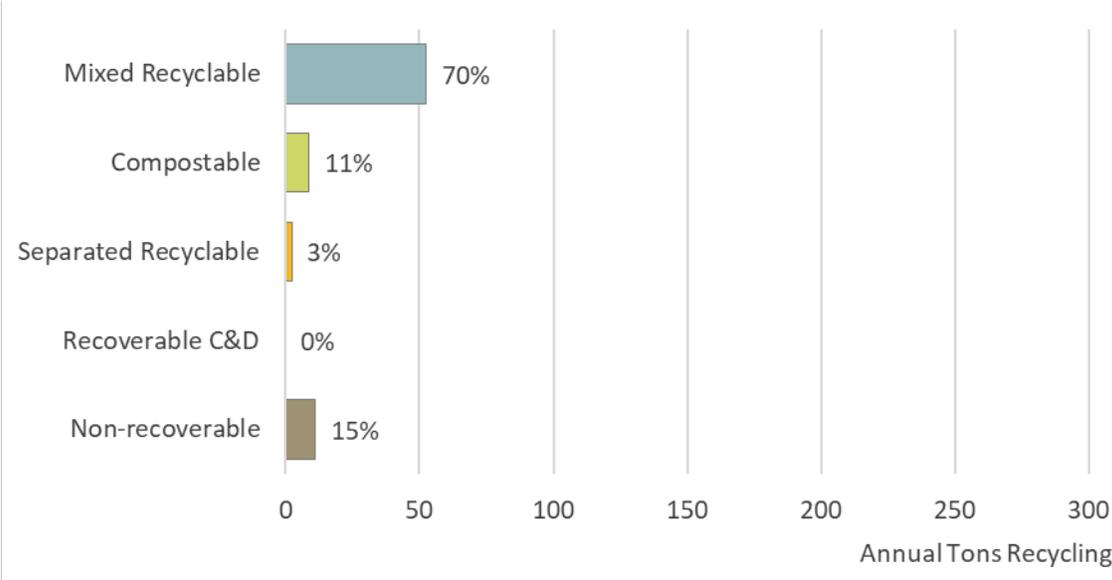
Table 32. Top Ten Material Types by Weight: Campus Laboratories Garbage

| Material Type                     | Recoverability   | Est. Percent | Est. Tons  |
|-----------------------------------|------------------|--------------|------------|
| Compostable/Soiled Paper          | Compostable      | 18%          | 48         |
| Food                              | Compostable      | 16%          | 45         |
| Other Film                        | Non-recoverable  | 8%           | 21         |
| Mixed Low-grade Paper             | Mixed Recyclable | 5%           | 14         |
| Lab Glass                         | Non-recoverable  | 5%           | 13         |
| Latex/Nitrile Gloves              | Non-recoverable  | 4%           | 10         |
| Non-recoverable & Composite Metal | Non-recoverable  | 3%           | 10         |
| Other Plastic Products            | Non-recoverable  | 3%           | 9          |
| Other Ferrous                     | Mixed Recyclable | 3%           | 8          |
| Clear & Orange Bag Medical Waste  | Non-recoverable  | 2%           | 7          |
| Top Ten Total                     |                  | 67%          | 185        |
| Remaining Recoverable             |                  | 21%          | 56         |
| Remaining Non-recoverable         |                  | 12%          | 34         |
| <b>Garbage Annual Tons</b>        |                  | <b>100%</b>  | <b>275</b> |

## COMPOSITION RESULTS: CAMPUS LABORATORIES RECYCLING

This section provides study findings on recycling from campus laboratories. Figure 58 shows the composition and quantities of recycling from campus laboratories by recoverability category. As shown, mixed recyclable is approximately 70 percent of the stream.

Figure 58. Annual Tons by Recoverability Category: Campus Laboratories Recycling



Contamination rates for combined fiber, which is collected separately from recycling on UW’s campus are not known. The top contaminants in recycling from campus laboratories are shown in Table 33. *Non-recoverable & composite paper* (representing non-recyclable paper such as facial tissues and carbon copy paper), *food*, and *compostable/soiled paper* are the most prevalent contaminant materials. Taken together, the top ten contaminant materials in recycling from campus laboratories is nearly 30 percent of the recycling stream, excluding combined fiber.

Table 33. Top Ten Contaminants by Weight: Campus Laboratories Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons |
|--|----------------------|--------------|-----------|
| Non-recoverable & Composite Paper            | Non-recoverable      | 11%          | 9         |
| Food   | Compostable          | 7%           | 5         |
| Compostable/Soiled Paper                     | Compostable          | 4%           | 3         |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable | 2%           | 2         |
| Other Film                                   | Non-recoverable      | 2%           | 1         |
| Other Plastic Products                       | Non-recoverable      | 1%           | 1         |
| Compostable Single-use Food Service Plastics | Compostable          | 1%           | 1         |
| Non-recoverable & Composite Plastic          | Non-recoverable      | 0.5%         | 0         |
| Expanded Polystyrene                         | Separated Recyclable | 0.4%         | 0         |
| Other Clean Polyethylene Film                | Separated Recyclable | 0.1%         | 0         |
| Top Ten Total                                |                      | 29%          | 22        |
| Remaining Recoverable                        |                      | 1%           | 0         |
| Remaining Non-recoverable                    |                      | 70%          | 52        |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>74</b> |

## COMPOSITION RESULTS: CAMPUS LABORATORIES COMPOST

This section presents findings on the recoverability of and contamination in compost from campus laboratory. As shown in Figure 59, 95 percent of the compost stream from campus laboratories is compostable.

Figure 59. Annual Tons by Recoverability Category: Campus Laboratories Compost

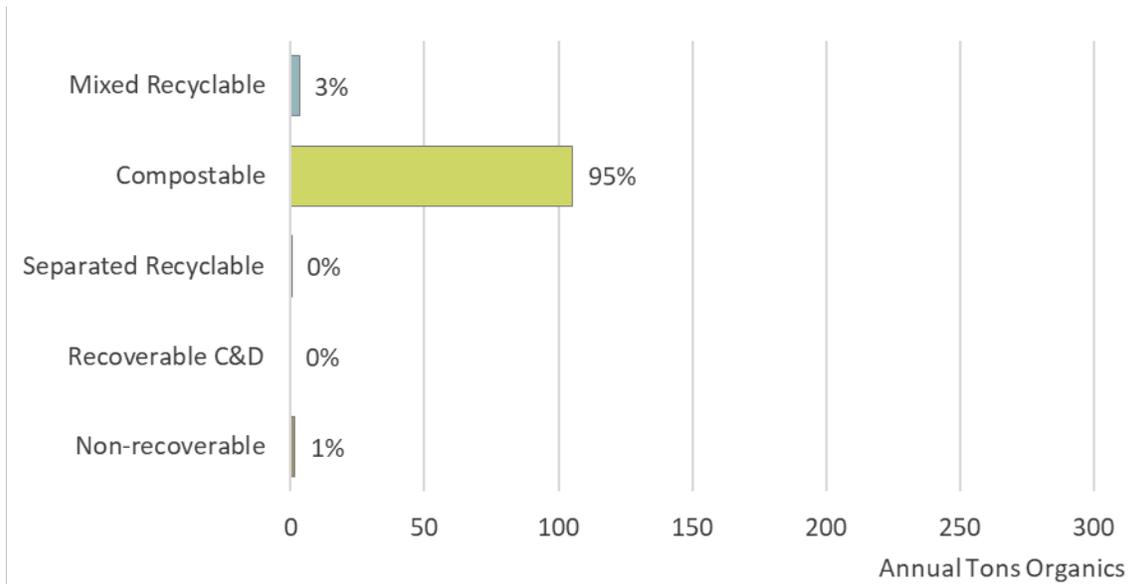


Table 34 lists the ten most prevalent contaminants by weight in compost from campus laboratories. *Non-compostable single-use food service paper* and *mixed low-grade paper* are the most common contaminants, each accounting for 1% of the stream.

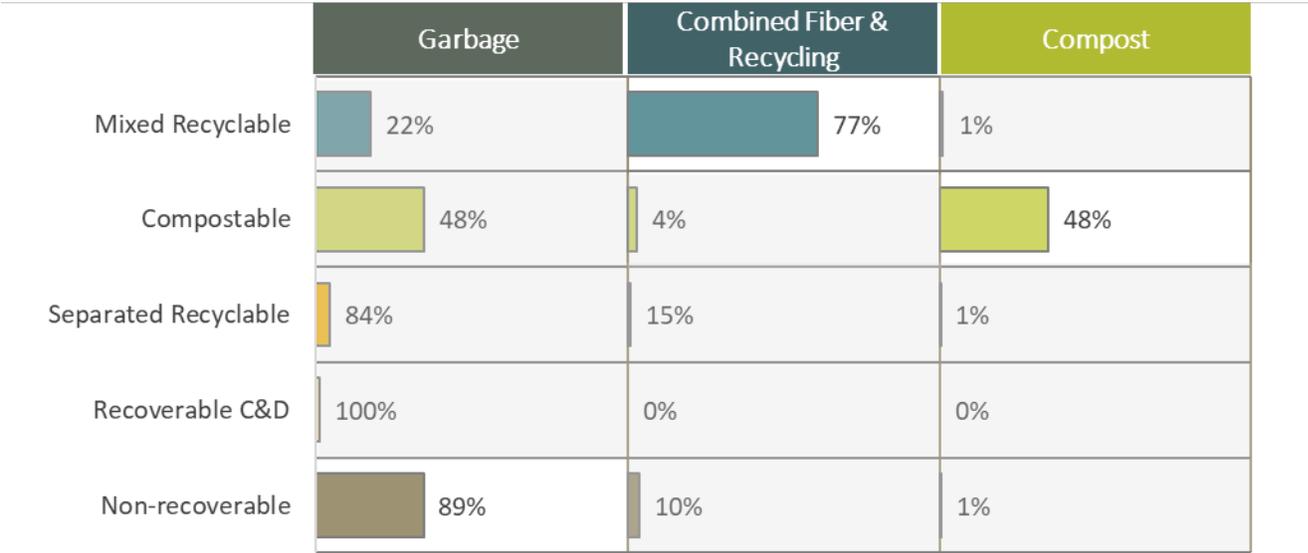
Table 34. Top Ten Contaminants by Weight: Campus Laboratories Compost

| Material Type                                 | Recoverability       | Est. Percent | Est. Tons  |
|---|----------------------|--------------|------------|
| Non-compostable Single-use Food Service Paper | Mixed Recyclable     | 1%           | 1          |
| Mixed Low-grade Paper                         | Mixed Recyclable     | 1%           | 1          |
| Fines & Miscellaneous                         | Non-recoverable      | 0.5%         | 1          |
| Rigid Containers                              | Mixed Recyclable     | 0.2%         | 0          |
| Other Film                                    | Non-recoverable      | 0.2%         | 0          |
| Clean Engineered Wood                         | Non-recoverable      | 0.2%         | 0          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable     | 0.2%         | 0          |
| PET Bottles & Containers                      | Mixed Recyclable     | 0.1%         | 0          |
| Other Chemical Waste                          | Non-recoverable      | 0.1%         | 0          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable | 0.1%         | 0          |
| <b>Top Ten Total</b>                          |                      | <b>4%</b>    | <b>4</b>   |
| Remaining Recoverable                         |                      | 1%           | 1          |
| Remaining Non-recoverable                     |                      | 95%          | 105        |
| <b>Compost Annual Tons</b>                    |                      | <b>100%</b>  | <b>110</b> |

## OPPORTUNITIES

This section summarizes opportunities to increase material recovery rates from campus laboratories at UW. Figure 60 presents findings on material recoverability by stream and accompanying capture rates. Separated recyclable and recoverable C&D materials are not recoverable if placed in garbage, recycling, or compost streams, as these have special recycling collection requirements. Capturing compostable material in the garbage presents an opportunity for UW to improve recovery rates from campus laboratories—only 48% of all compostable material generated is being collected through composting programs; nearly half of the material is disposed of through garbage, and compostable material is also the largest portion of recoverable material in garbage.

Figure 60. Recoverability and Actual Disposal: Campus Laboratories



Bars report annual tons and percentages report capture of material by each stream.

Table 35 provides more detail on potentially recoverable materials and their capture rates from campus laboratories, listing the ten recyclable or compostable materials with the most tons remaining (unrecovered). *Compostable/soiled paper* and *food* are the materials with the most remaining tons for recovery, each with approximately 50 tons in non-compost streams. The capture rates for compostable paper and plastics are low (39% for *compostable/soiled paper* and 27% for *compostable single-use food service plastics*), suggesting an opportunity for additional education on how to properly dispose of this type of material on campus.

Table 35. Top Recoverable Material Types: Campus Laboratories

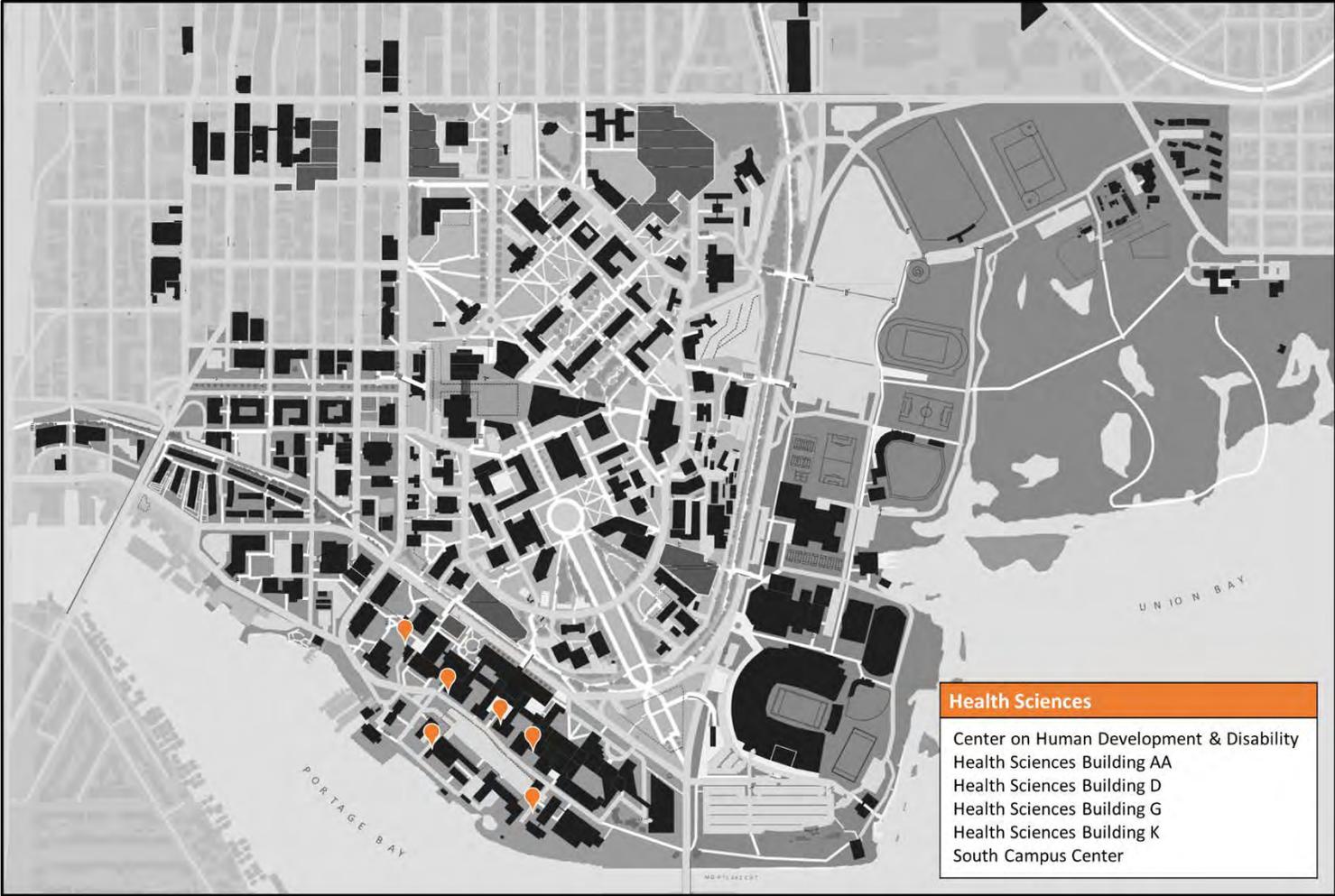
| Material Type                                | Recoverability   | Tons       |            | Capture Rate |
|--|------------------|------------|------------|--------------|
|  |                  | Recovered  | Remaining  |              |
| Compostable/Soiled Paper                     | Compostable      | 32         | 51         | 39%          |
| Food   | Compostable      | 67         | 50         | 57%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 153        | 31         | 83%          |
| Other Ferrous                                | Mixed Recyclable | 0          | 8          | 0%           |
| Leaves/Grass/Prunings                        | Compostable      | 1          | 7          | 8%           |
| Rigid Containers                             | Mixed Recyclable | 2          | 5          | 30%          |
| Compostable Single-use Food Service Plastics | Compostable      | 1          | 3          | 27%          |
| PET Bottles & Containers                     | Mixed Recyclable | 7          | 3          | 68%          |
| Other Nonferrous                             | Mixed Recyclable | 0          | 2          | 0%           |
| Beverage Glass                               | Mixed Recyclable | 14         | 2          | 87%          |
| <b>Recyclable</b>                            |                  | <b>183</b> | <b>56</b>  | <b>77%</b>   |
| <b>Compostable</b>                           |                  | <b>105</b> | <b>112</b> | <b>48%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>288</b> | <b>168</b> | <b>63%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Health Sciences

This section describes the quantities and composition of material disposed in garbage, recycling, combined fiber, and compost streams from health sciences. This generator group includes material from the Magnuson Health Sciences Center, containing a combination of laboratories, offices, and classrooms. The map below shows all locations of collection containers for garbage, recycling, and compost from health sciences. Building names associated with collection locations are included in the legend.

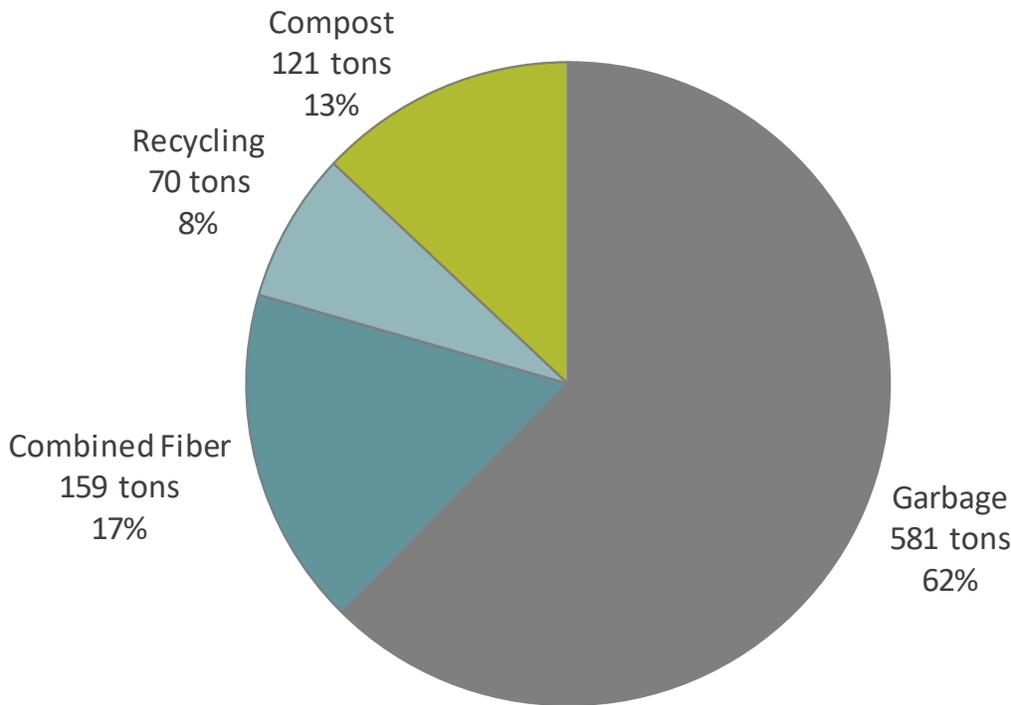
Figure 61. Garbage, Recycling, and Compost Collection Locations: Health Sciences



Health sciences disposed of 931 tons of material annually, and 38 percent of this material was recovered through the recycling, combined fiber, and compost streams.

Figure 62 shows the composition of material generated by health sciences by stream. This generator group has the lowest percentage of recoverable material in the garbage compared to any other generator group included in the study.

Figure 62. Annual Tons by Stream: Health Sciences



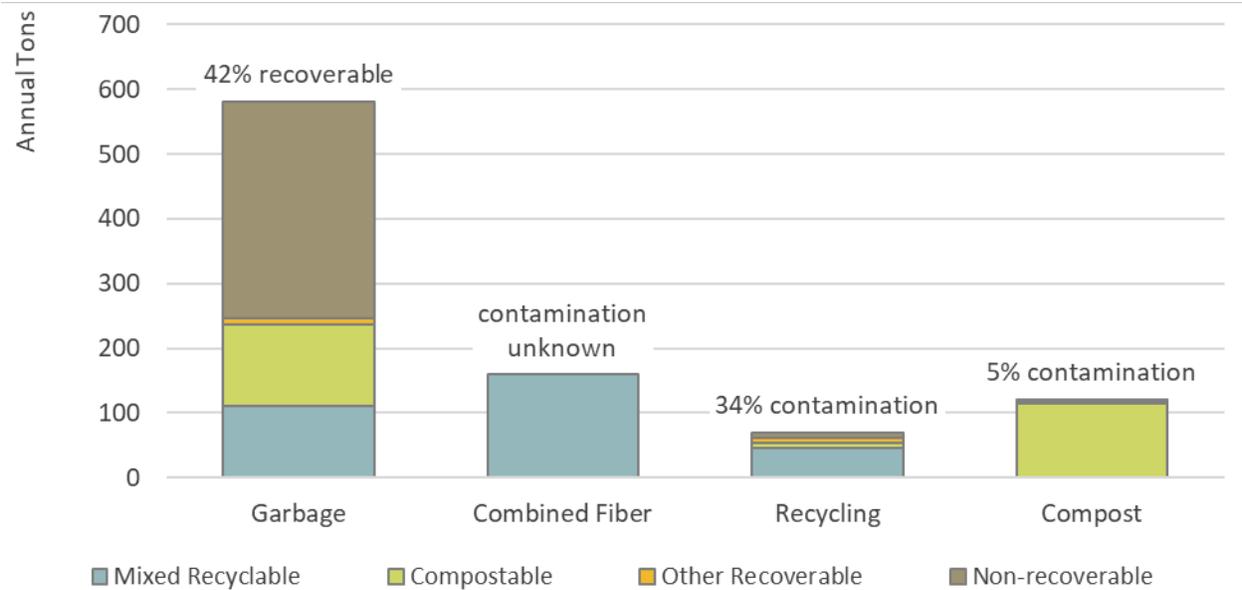
The table below compares the annual garbage disposal and the disposal rate normalized to building size for the current and 2003 study. As shown, total garbage disposal from health sciences decreased by 49 percent since 2003, even as the associated building area increased by nearly 55 percent.

Table 36. Comparison of Garbage Disposal Rates (2003 and 2018): Health Sciences

|                                   | 2003         | 2018       | % diff      |
|-----------------------------------|--------------|------------|-------------|
| <b>Health Sciences (tons/yr.)</b> | <b>1,148</b> | <b>581</b> | <b>-49%</b> |
| Building Area (1,000 sq. ft.)     | 1,238        | 1,915      | 55%         |
| lbs./1,000 sq. ft.                | 1,855        | 607        | -67%        |

Figure 63 presents the quantities and compositions of each stream by recoverability category. 42 percent of the material in the garbage is recoverable through the recycling, combined fiber, and compost streams. Over one-third (34%) of the material in health sciences recycling is contamination, which is greater than the overall campus recycling contamination rate of 26 percent. Approximately 5 percent of the material in the compost is contamination, less than the overall campus compost contamination rate of 8 percent. Health sciences and compost both have the second-lowest contamination rates for compost, second only to residence halls.

Figure 63. Recoverability and Contamination by Stream: Health Sciences



*The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.*

Figure 64 displays the composition and quantity of material generated from health sciences by material class. The data include all material disposed in the garbage, recycling, combined fiber, and compost streams. The largest material classes generated by health sciences are paper (50%) and regulated wastes (23%). Health sciences is the only generator group in to have regulated wastes as one of the top material classes present in all streams.

Figure 64. Annual Tons by Material Class, All Streams: Health Sciences

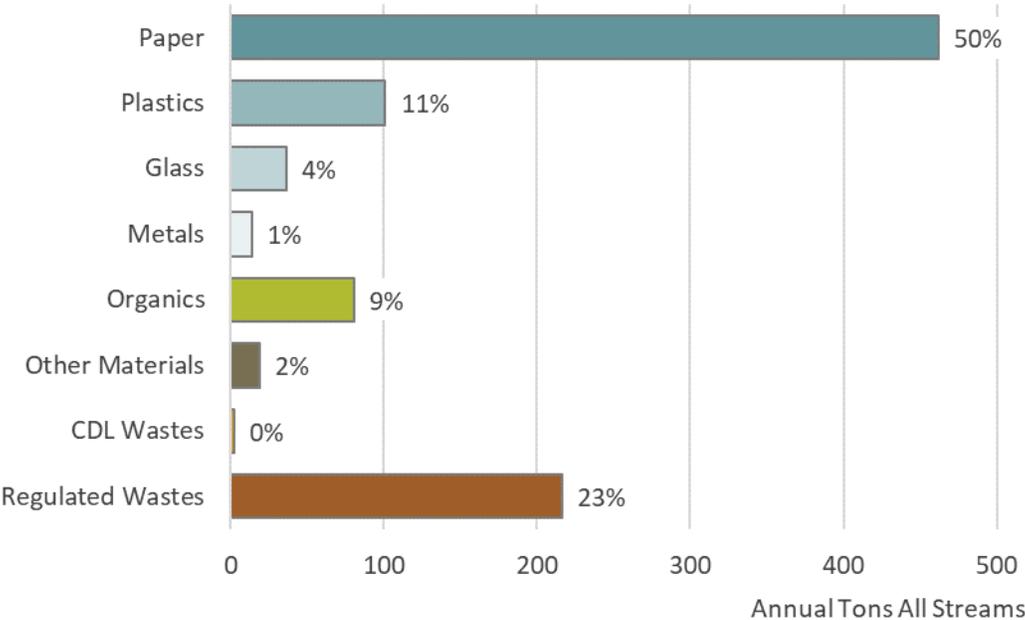
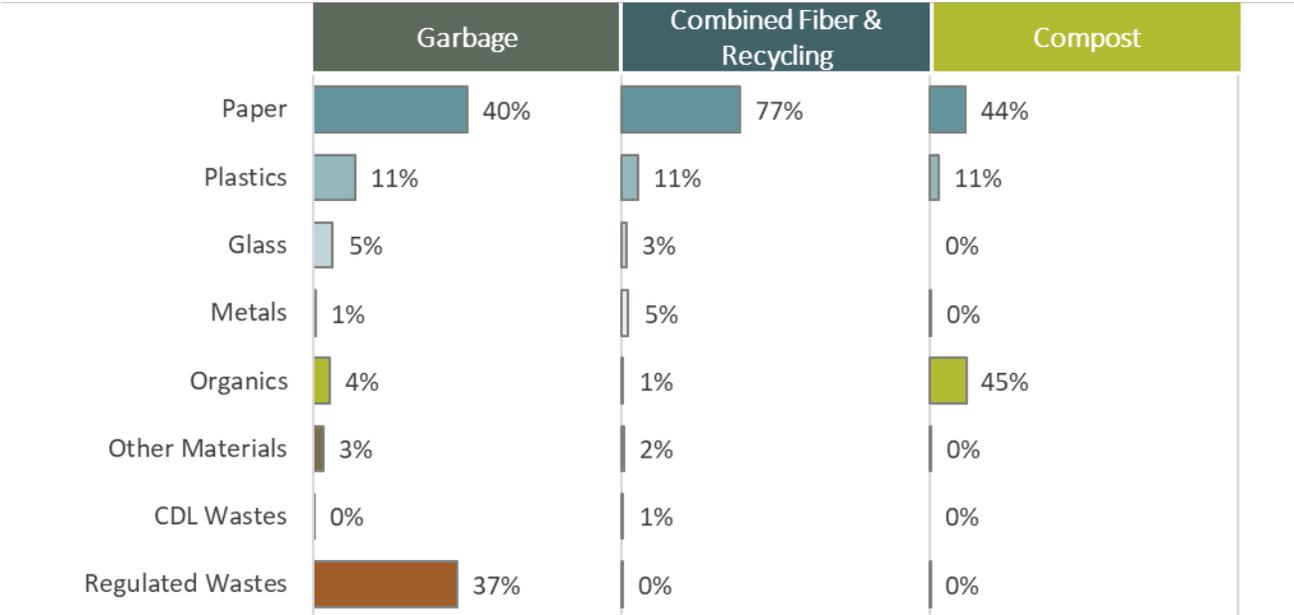


Figure 65 details the compositions and relative quantities of material by material class in each stream. As shown:

- ▶ The two most prevalent material classes in the garbage are paper (40%) and regulated wastes (37%).
- ▶ Paper is over three-quarters (77%) of material found in the combined fiber and recycling streams.
- ▶ 89 percent of material in the compost is from two material classes: organics (45%) and paper (44%).

Figure 65. Annual Tons by Material Class and Stream: Health Sciences



Bars report annual tons and percentages report class composition for each stream.

Table 37 lists the most prevalent material types by weight across all streams in health sciences, excluding the combined fiber stream. Nearly one-quarter (23%) of material generated by health sciences is *red bag medical waste*, which is a non-regulated, non-recoverable material. Health sciences is the only generator group for which the top material type by weight is a non-recoverable material. The next most prevalent materials are *compostable/soiled paper* (20%), *food* (10%) and *mixed low-grade paper* (10%), all of which are recoverable through compost or recycling streams. Among generator groups included in this study, health sciences facilities generated the smallest percentage of *food* (10%). However, because health sciences facilities generate a large quantity of material overall, health sciences facilities are not the smallest generator of food by weight.

Table 37. Top Ten Material Types by Weight, All Streams: Health Sciences

| Material Type                     | Recoverability   | Est. Percent | Est. Tons  |
|-----------------------------------|------------------|--------------|------------|
| Red Bag Medical Waste             | Non-recoverable  | 23%          | 179        |
| Compostable/Soiled Paper          | Compostable      | 20%          | 152        |
| Food                              | Compostable      | 10%          | 80         |
| Mixed Low-grade Paper             | Mixed Recyclable | 10%          | 74         |
| Non-recoverable & Composite Paper | Non-recoverable  | 4%           | 33         |
| Lab Glass                         | Non-recoverable  | 4%           | 30         |
| Clear & Orange Bag Medical Waste  | Non-recoverable  | 4%           | 29         |
| Other Film                        | Non-recoverable  | 3%           | 23         |
| High-grade Paper                  | Mixed Recyclable | 3%           | 22         |
| PET Bottles & Containers          | Mixed Recyclable | 2%           | 13         |
| Top Ten Total                     |                  | 82%          | 635        |
| Remaining Recoverable             |                  | 11%          | 85         |
| Remaining Non-recoverable         |                  | 7%           | 52         |
| <b>Generation Annual Tons</b>     |                  | <b>100%</b>  | <b>772</b> |

## COMPOSITION RESULTS: HEALTH SCIENCES GARBAGE

This section presents compositions and quantities for materials in health sciences garbage. As shown in Figure 66, over half (58%) of material in the garbage is non-recoverable. Approximately two-fifths (41%) of material in the garbage is recoverable through compost (22%) or recycling (19%).

Figure 66. Annual Tons by Recoverability Category: Health Sciences Garbage

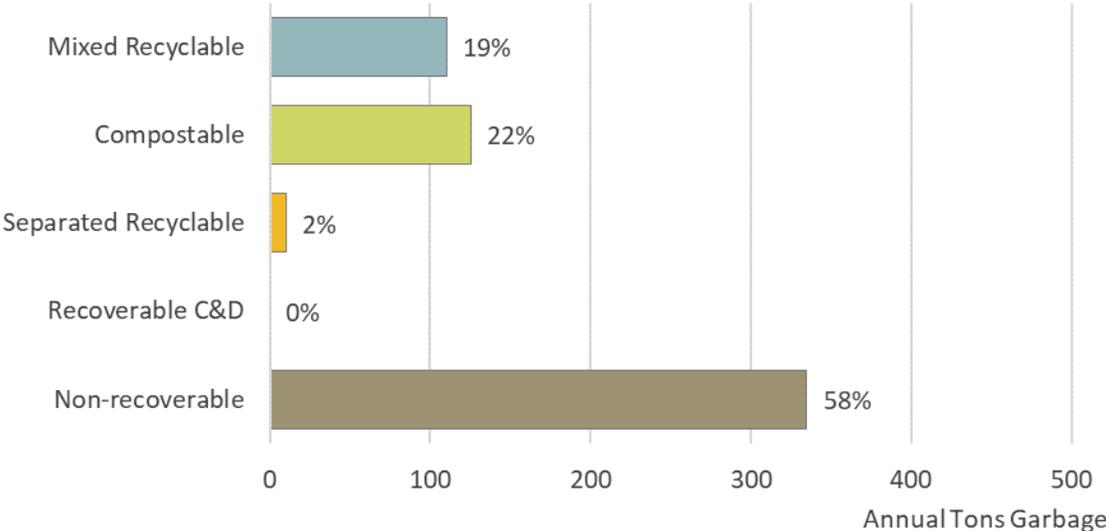


Table 38 shows the most prevalent material types in health sciences garbage by weight. Nearly one-third (31%) of material in garbage is *red bag medical waste*. The next most prevalent material types in garbage are *compostable/soiled paper* (17%), which is compostable, and *mixed low-grade paper* (12%), which is mixed recyclable.

Table 38. Top Ten Material Types by Weight: Health Sciences Garbage

| Material Type                       | Recoverability   | Est. Percent | Est. Tons  |
|-------------------------------------|------------------|--------------|------------|
| Red Bag Medical Waste               | Non-recoverable  | 31%          | 179        |
| Compostable/Soiled Paper            | Compostable      | 17%          | 99         |
| Mixed Low-grade Paper               | Mixed Recyclable | 12%          | 69         |
| Non-recoverable & Composite Paper   | Non-recoverable  | 5%           | 31         |
| Clear & Orange Bag Medical Waste    | Non-recoverable  | 5%           | 28         |
| Lab Glass                           | Non-recoverable  | 5%           | 28         |
| Food                                | Compostable      | 4%           | 24         |
| Other Film                          | Non-recoverable  | 4%           | 21         |
| High-grade Paper                    | Mixed Recyclable | 3%           | 20         |
| Non-recoverable & Composite Plastic | Non-recoverable  | 2%           | 10         |
| Top Ten Total                       |                  | 88%          | 511        |
| Remaining Recoverable               |                  | 6%           | 34         |
| Remaining Non-recoverable           |                  | 6%           | 36         |
| <b>Garbage Annual Tons</b>          |                  | <b>100%</b>  | <b>581</b> |

## COMPOSITION RESULTS: HEALTH SCIENCES RECYCLING

This section shows the composition and quantities of recycling collected from health sciences. Figure 67 shows the composition of recycling from health sciences buildings by recoverability category. As shown, two-thirds (66%) of material in the recycling stream is mixed recyclable material.

Figure 67. Annual Tons by Recoverability Category: Health Sciences Recycling

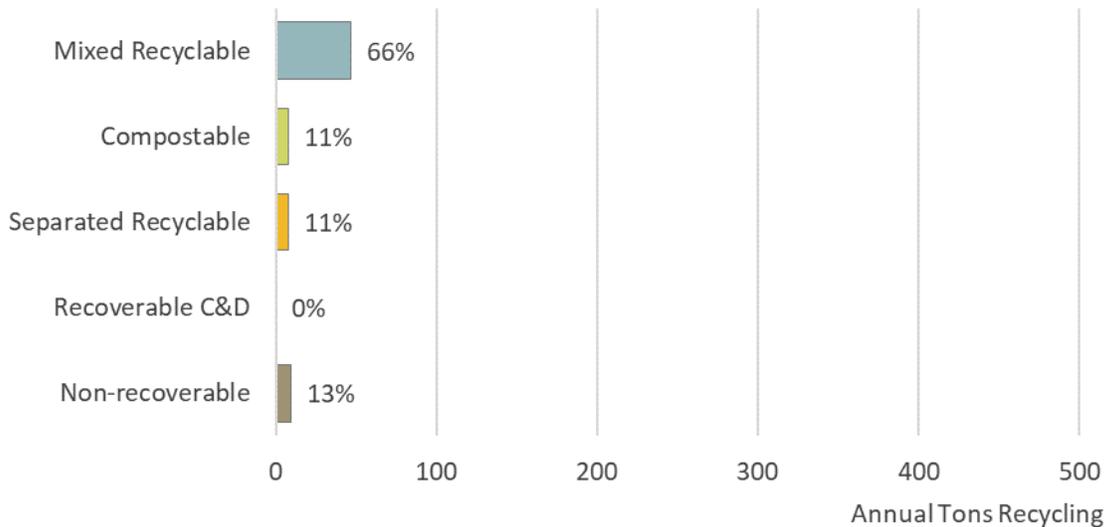


Table 39 lists the most prevalent contaminants present in health sciences recycling by weight. The most prevalent contaminants are *compostable/soiled paper* (5%) and *other electronics* (5%).

Table 39. Top Ten Contaminants by Weight: Health Sciences Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons |
|--|----------------------|--------------|-----------|
| Compostable/Soiled Paper                     | Compostable          | 5%           | 4         |
| Other Electronics                            | Separated Recyclable | 5%           | 3         |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable | 3%           | 2         |
| Food   | Compostable          | 3%           | 2         |
| Construction Debris                          | Non-recoverable      | 3%           | 2         |
| Other Plastic Products                       | Non-recoverable      | 3%           | 2         |
| Lab Glass                                    | Non-recoverable      | 2%           | 2         |
| Other Clean Polyethylene Film                | Separated Recyclable | 2%           | 2         |
| Compostable Single-use Food Service Plastics | Compostable          | 2%           | 1         |
| Non-recoverable & Composite Paper            | Non-recoverable      | 1%           | 1         |
| <b>Top Ten Total</b>                         |                      | <b>30%</b>   | <b>21</b> |
| Remaining Recoverable                        |                      | 4%           | 3         |
| Remaining Non-recoverable                    |                      | 66%          | 46        |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>70</b> |

## COMPOSITION RESULTS: HEALTH SCIENCES COMPOST

This section describes the composition results for health sciences compost stream. As shown in Figure 68, 95 percent of material is compostable. Mixed recyclable material (4%), non-recoverable material (1%), and separated recyclables (<1%) make up the remaining categories in compost and are contaminants in this stream.

Figure 68. Annual Tons by Recoverability Category: Health Sciences Compost

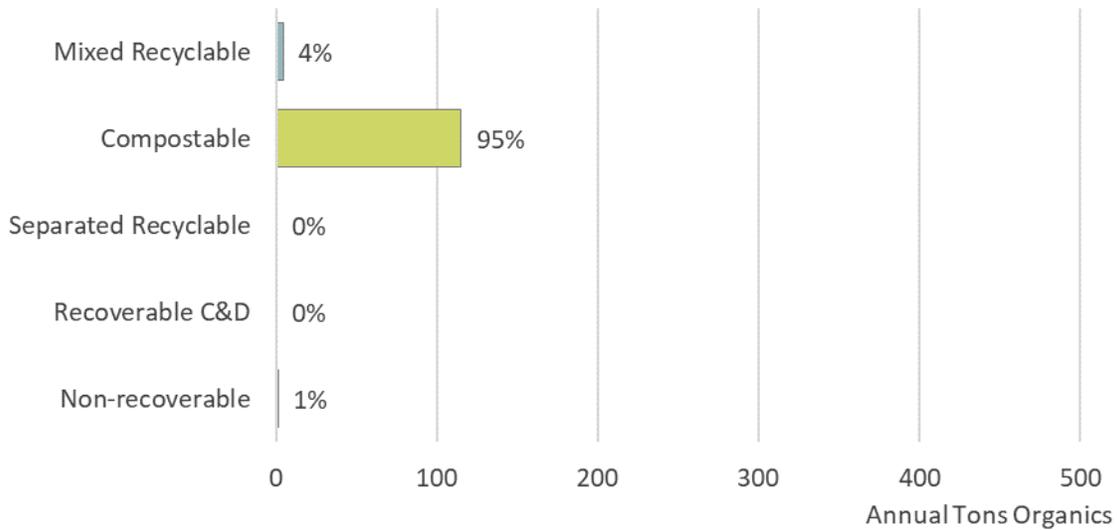


Table 39 shows the top contaminants found in health sciences compost by weight. The most prevalent contaminants in compost is *non-compostable single-use food service paper* (1%) and *mixed low-grade paper* (1%).

Table 40. Top Ten Contaminants by Weight: Health Sciences Compost

| Material Type                                 | Recoverability       | Est. Percent | Est. Tons  |
|---|----------------------|--------------|------------|
| Non-compostable Single-use Food Service Paper | Mixed Recyclable     | 1%           | 1          |
| Mixed Low-grade Paper                         | Mixed Recyclable     | 1%           | 1          |
| Rigid Containers                              | Mixed Recyclable     | 0.5%         | 1          |
| Non-recoverable & Composite Paper             | Non-recoverable      | 0.4%         | 0          |
| Other Film                                    | Non-recoverable      | 0.3%         | 0          |
| PET Bottles & Containers                      | Mixed Recyclable     | 0.3%         | 0          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable     | 0.2%         | 0          |
| Textiles                                      | Separated Recyclable | 0.2%         | 0          |
| Other Single-use Aluminum                     | Mixed Recyclable     | 0.2%         | 0          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable     | 0.2%         | 0          |
| <b>Top Ten Total</b>                          |                      | <b>4%</b>    | <b>5</b>   |
| Remaining Recoverable                         |                      | 1%           | 1          |
| Remaining Non-recoverable                     |                      | 95%          | 114        |
| <b>Compost Annual Tons</b>                    |                      | <b>100%</b>  | <b>121</b> |

## OPPORTUNITIES

This section describes opportunities to increase recovery of materials generated by health sciences through recycling and compost. Figure 69 shows the capture rates by stream and by recoverability category for materials disposed of by health sciences. Currently, over half (54%) of compostable material disposed of by health sciences is going in the garbage (51%) or recycling (3%), where they are not recovered. Similarly, over one-third (34%) of mixed recyclable material is going in the garbage, presenting an opportunity to recover this material through the recycling stream.

Figure 69. Recoverability and Actual Disposal: Health Sciences

|                      | Garbage | Combined Fiber & Recycling | Compost |
|----------------------|---------|----------------------------|---------|
| Mixed Recyclable     | 34%     | 64%                        | 1%      |
| Compostable          | 51%     | 3%                         | 46%     |
| Separated Recyclable | 56%     | 41%                        | 3%      |
| Recoverable C&D      |         |                            |         |
| Non-recoverable      | 97%     | 3%                         | 0%      |

Bars report annual tons and percentages report capture of material by each stream.

Table 41 provides greater detail on the types of materials generated by health sciences that can be recovered, listed in order from most recoverable tons remaining. Recoverable tons are material not already collected from this generator group as recycling or compost. *Recyclable paper & combined fiber* have the greatest potential for recoverability, with 104 tons that are currently not being captured in recycling. *Compostable/soiled paper* has the next largest potential for recoverability, with 103 tons that are not currently being captured in recycling. In addition, the capture rate for compostable/soiled paper is less than 33 percent, meaning that the over two-thirds of this material is currently disposed of as garbage or a contaminant in recycling.

Table 41. Top Recoverable Material Types: Health Sciences

| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 172            | 104            | 62%          |
| Compostable/Soiled Paper                     | Compostable      | 49             | 103            | 32%          |
| Food   | Compostable      | 54             | 26             | 67%          |
| Rigid Containers                             | Mixed Recyclable | 3              | 4              | 44%          |
| Compostable Single-use Food Service Plastics | Compostable      | 6              | 3              | 68%          |
| PET Bottles & Containers                     | Mixed Recyclable | 10             | 3              | 78%          |
| Aluminum Cans                                | Mixed Recyclable | 3              | 1              | 68%          |
| Beverage Glass                               | Mixed Recyclable | 6              | 1              | 87%          |
| Other Ferrous                                | Mixed Recyclable | 0              | 1              | 9%           |
| Other Single-use Aluminum                    | Mixed Recyclable | 0              | 1              | 19%          |
| <b>Recyclable</b>                            |                  | <b>205</b>     | <b>115</b>     | <b>64%</b>   |
| <b>Compostable</b>                           |                  | <b>114</b>     | <b>133</b>     | <b>46%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>320</b>     | <b>248</b>     | <b>56%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Maintenance Buildings

This section describes the quantities and composition of material disposed of by maintenance buildings to garbage, recycling, combined fiber, and compost streams. Maintenance buildings are those with maintenance and campus operations, such as the power plant, UW Police Department, and the Plant Services Building. The map below shows all locations of collection containers for garbage, recycling, and compost from academic buildings. Building names associated with collection locations are included in the legend.

Figure 70. Garbage, Recycling, and Compost Collection Locations: Maintenance Buildings

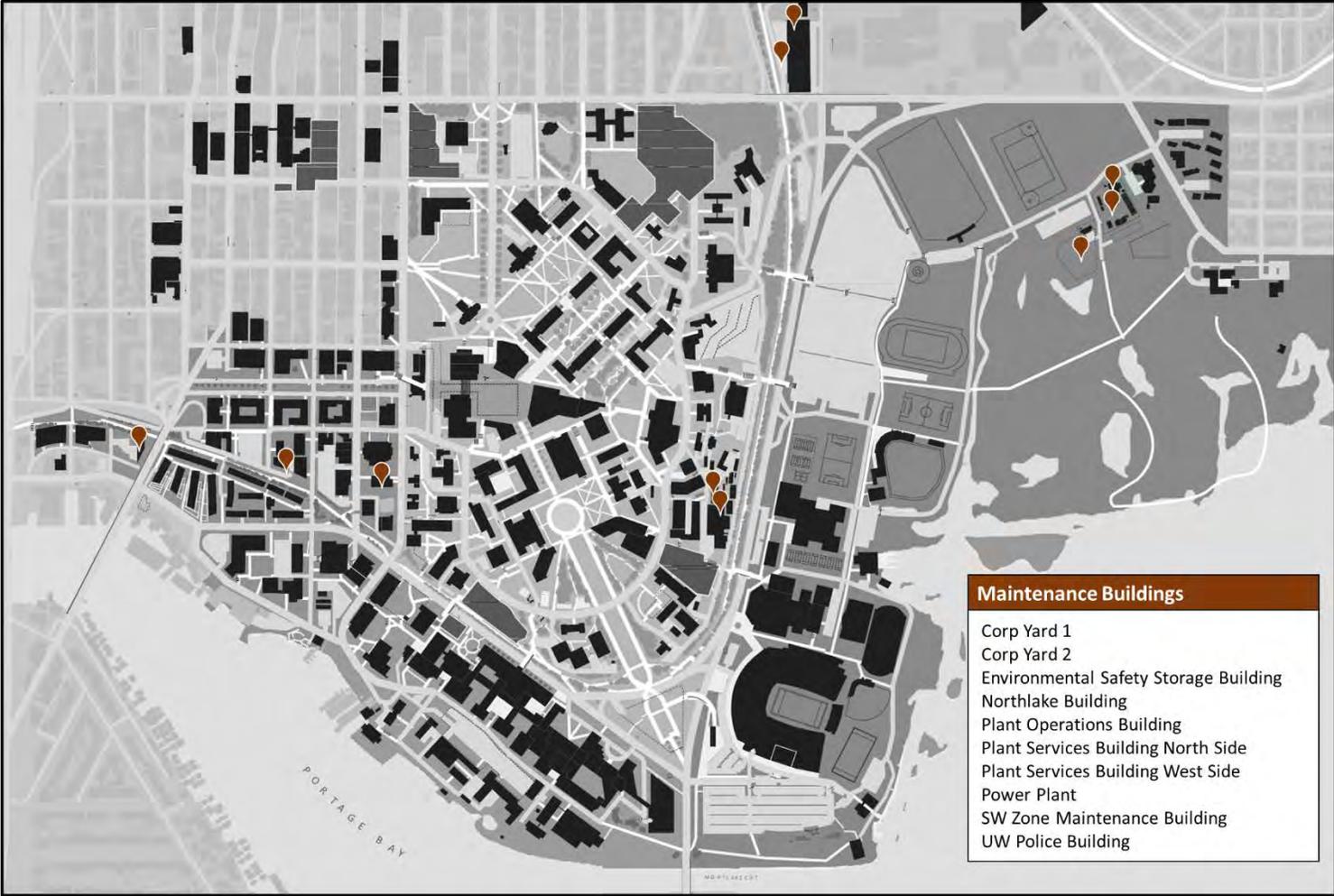
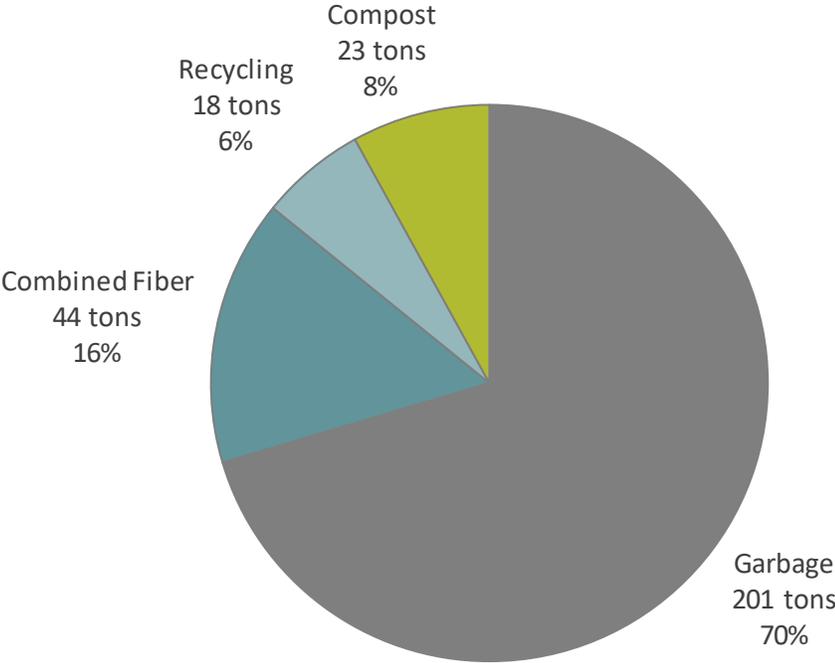


Figure 71 shows the composition of generation by maintenance buildings by stream. Maintenance buildings disposed of 285 tons of material annually and achieved a 30 percent recovery rate. This generator group achieved the second-lowest recovery rate among those defined for the study, second only to Outdoor Litter Receptacles: Smart Cans (4% recovery rate). In addition, maintenance buildings have the lowest percentage of material disposed as compost and the second-lowest percentage of material disposed of as recycling.

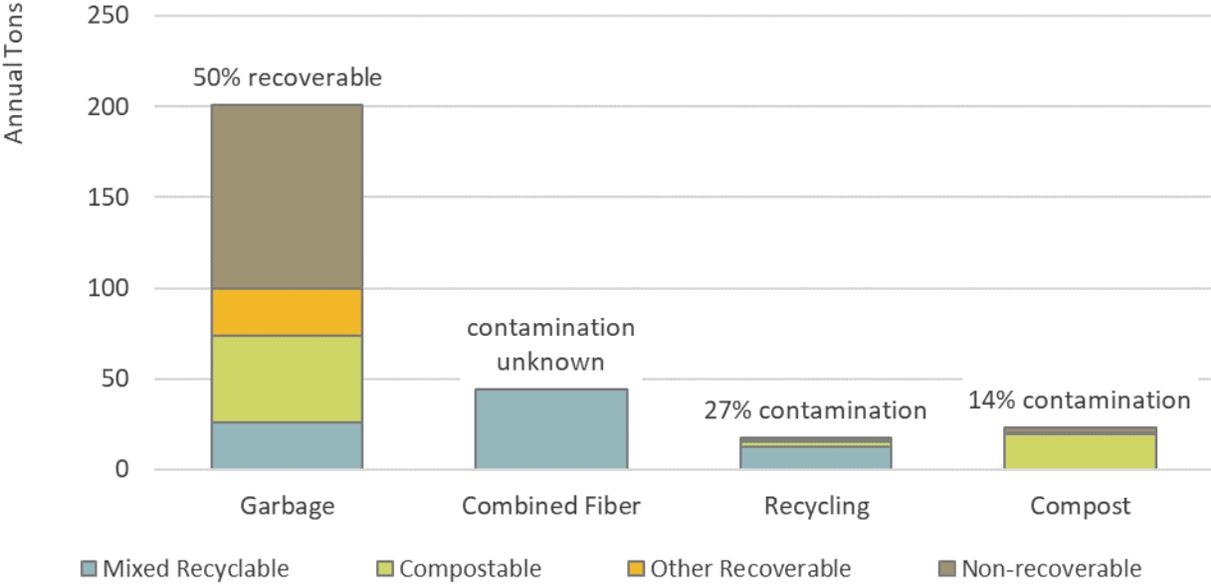
Annual garbage disposal decreased by 74 percent since 2003, from 770 tons to 201 tons.

Figure 71. Annual Tons by Stream: Maintenance Buildings



Below, Figure 72 shows the recoverability of garbage and the contamination of recycling streams and compost from maintenance buildings. The portion of garbage that is recoverable material from maintenance buildings is lower than for the campus overall (50% for maintenance buildings vs. 62% overall). Maintenance buildings have the second-lowest percentage of recoverable material in the garbage compared to the other generator groups in the study. Recycling contamination rates are comparable to the campus overall (27% for maintenance buildings vs. 26% overall), and compost contamination rates are higher than the campus average (14% for maintenance buildings vs. 8% overall). Maintenance buildings are the generator group with the highest compost contamination rate.

Figure 72. Recoverability and Contamination by Stream: Maintenance Buildings



*The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.*

The figure below (Figure 73) shows the composition and quantities of material generated by maintenance buildings by material class. The data include all material disposed in the garbage, recycling, combined fiber, and compost streams. The largest portion of the disposed material by weight from maintenance buildings is paper & combined fiber, accounting for over one-third (34%) of the stream. Other large material classes are other materials (18%), organics (16%), CDL wastes (14%), and plastics (13%). Maintenance buildings have a different profile of materials by material class than the other generator group included in the study. For example, they are one of two generator groups to have the material class “Other Materials” be among the top material class present in all streams. Maintenance buildings are also the only generator group to have more than 1 percent CDL wastes in its disposed material.

Figure 73. Annual Tons by Material Class, All Streams: Maintenance Buildings

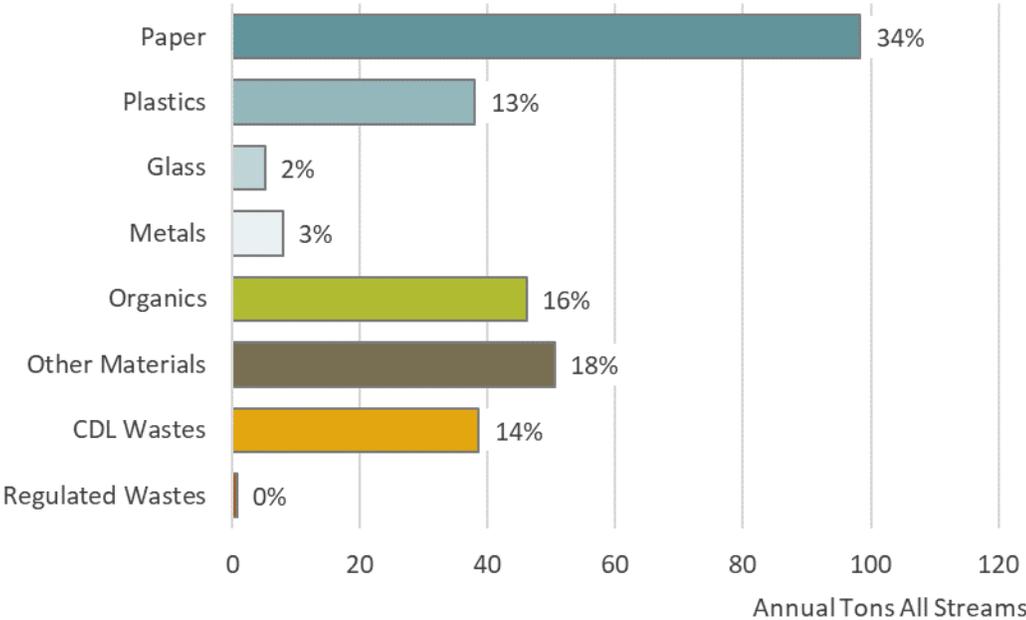
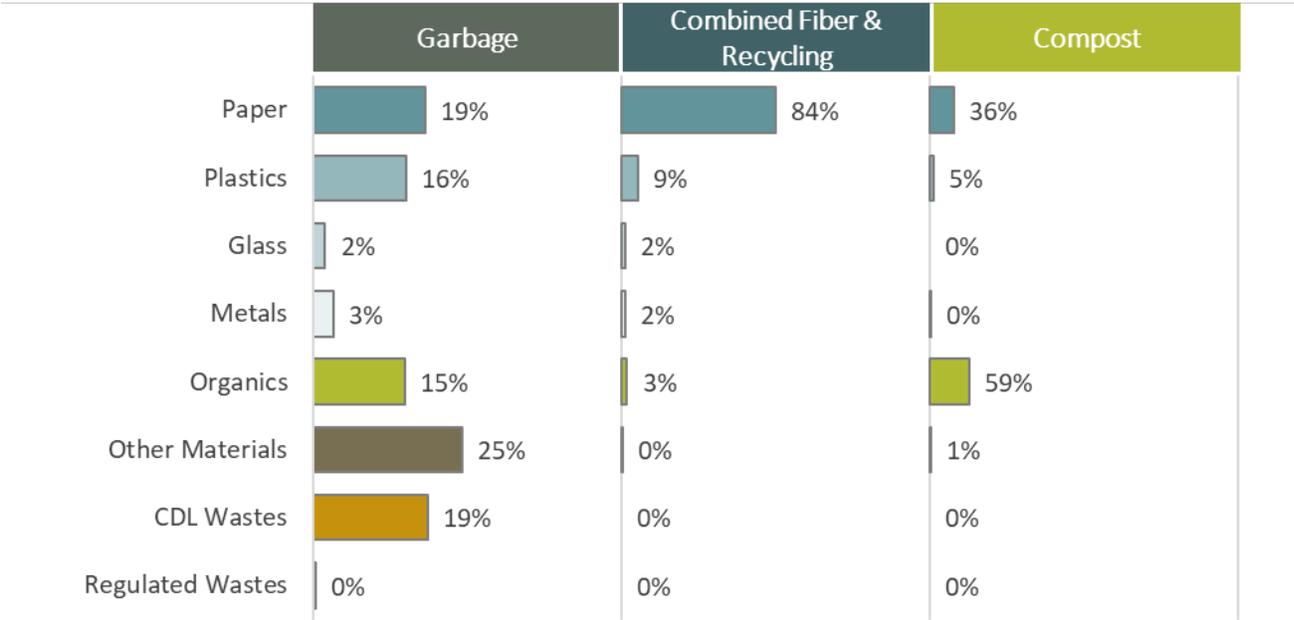


Figure 74 provides more detail on the composition and quantities of maintenance building material by material class, breaking down the data by stream. As shown:

- ▶ The largest material class in garbage is other materials (25%), followed by CDL wastes (19%) and paper (19%).
- ▶ Paper is the dominant material class in the combined paper & recycling streams, accounting for 84 percent by weight.
- ▶ Organics (59%) and paper (36%) are the largest material classes in compost, together accounting for approximately 95 percent of the stream.

Figure 74. Annual Tons by Material Class and Stream: Maintenance Buildings



Bars report annual tons and percentages report class composition for each stream.

The table below (Table 42) lists the top material types by weight across all streams (excluding combined fiber) from maintenance buildings. As shown, the top three material types are *food* (13%), *carpet & padding* (12%), and *compostable/soiled paper* (10%), together accounting for over one-third of disposed material from this generator group. This is the only generator group to have carpet and padding material among its top generated material types.

Table 42. Top Ten Material Types by Weight, All Streams: Maintenance Buildings

| Material Type                 | Recoverability       | Est. Percent | Est. Tons  |
|-------------------------------|----------------------|--------------|------------|
| Food                          | Compostable          | 13%          | 32         |
| Carpet & Padding              | Non-recoverable      | 12%          | 29         |
| Compostable/Soiled Paper      | Compostable          | 10%          | 24         |
| Mixed Low-grade Paper         | Mixed Recyclable     | 5%           | 12         |
| Rubber Products               | Non-recoverable      | 5%           | 12         |
| Leaves/Grass/Prunings         | Compostable          | 5%           | 11         |
| Textiles                      | Separated Recyclable | 4%           | 11         |
| Mixed Textiles                | Separated Recyclable | 4%           | 10         |
| Other Film                    | Non-recoverable      | 4%           | 9          |
| Fines & Miscellaneous         | Non-recoverable      | 3%           | 8          |
| Top Ten Total                 |                      | 65%          | 158        |
| Remaining Recoverable         |                      | 15%          | 37         |
| Remaining Non-recoverable     |                      | 19%          | 46         |
| <b>Generation Annual Tons</b> |                      | <b>100%</b>  | <b>241</b> |

## COMPOSITION RESULTS: MAINTENANCE BUILDINGS GARBAGE

This section presents composition results for garbage from maintenance buildings. Figure 75 below presents the quantities and composition for this stream by recoverability category. As shown, half (50%) of garbage from maintenance buildings is non-recoverable. The next largest recoverability category by weight is compostable material, accounting for nearly one-quarter (24%) of the stream.

Figure 75. Annual Tons by Recoverability Category: Maintenance Buildings Garbage

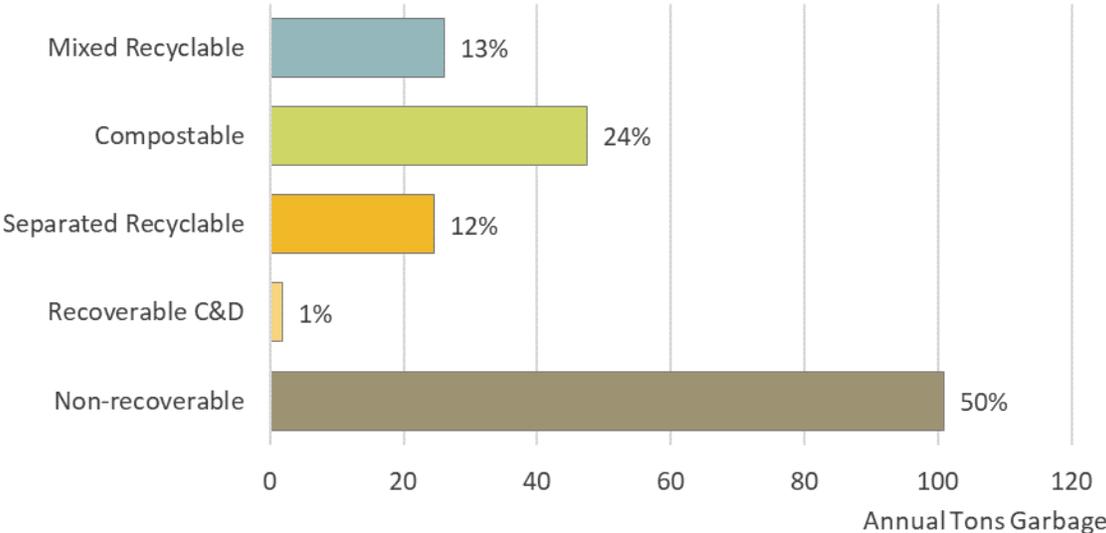


Table 43 lists the top material types in garbage from maintenance buildings by weight. The top material type in garbage is *carpet & padding*, accounting for 14 percent of the stream. The next most prevalent material types in this stream are *food* (9%) and *compostable/soiled paper* (8%).

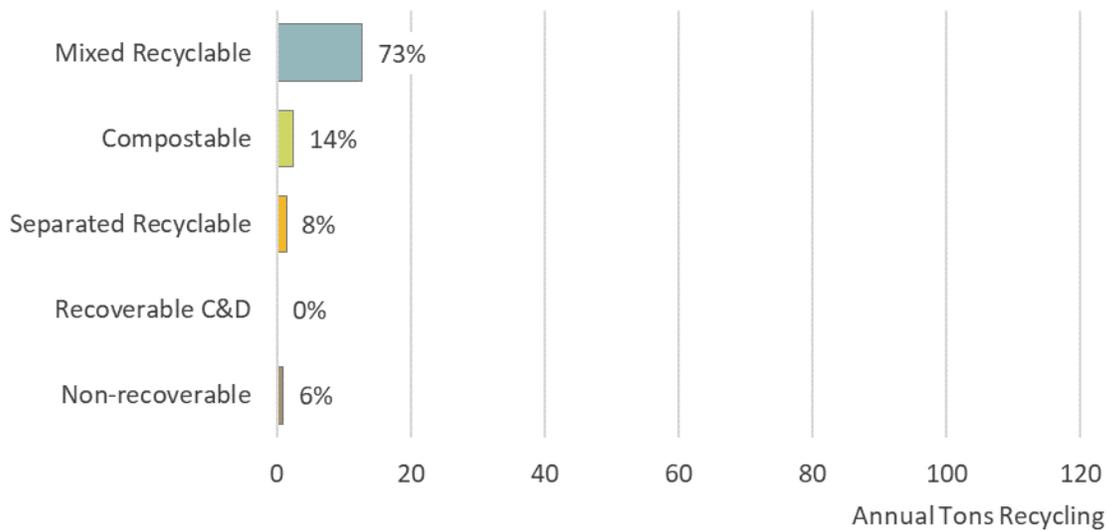
Table 43. Top Ten Material Types by Weight: Maintenance Buildings Garbage

| Material Type              | Recoverability       | Est. Percent | Est. Tons  |
|----------------------------|----------------------|--------------|------------|
| Carpet & Padding           | Non-recoverable      | 14%          | 29         |
| Food                       | Compostable          | 9%           | 19         |
| Compostable/Soiled Paper   | Compostable          | 8%           | 16         |
| Rubber Products            | Non-recoverable      | 6%           | 12         |
| Leaves/Grass/Prunings      | Compostable          | 6%           | 11         |
| Mixed Textiles             | Separated Recyclable | 5%           | 10         |
| Textiles                   | Separated Recyclable | 5%           | 10         |
| Mixed Low-grade Paper      | Mixed Recyclable     | 5%           | 9          |
| Other Film                 | Non-recoverable      | 5%           | 9          |
| Fines & Miscellaneous      | Non-recoverable      | 4%           | 8          |
| Top Ten Total              |                      | 67%          | 134        |
| Remaining Recoverable      |                      | 12%          | 24         |
| Remaining Non-recoverable  |                      | 21%          | 43         |
| <b>Garbage Annual Tons</b> |                      | <b>100%</b>  | <b>201</b> |

## COMPOSITION RESULTS: MAINTENANCE BUILDINGS RECYCLING

This section presents composition results for recycling from maintenance buildings. As shown in Figure 76, nearly three-quarters of the recycling by recoverability category is mixed recyclable material (73%). The remaining material is contamination in the recycling stream.

Figure 76. Annual Tons by Recoverability Category: Maintenance Buildings Recycling



Major contaminants in recycling from maintenance buildings by weight are shown in Table 44. The most prevalent contaminant is *food* (10% of the stream), followed by *loose clean shopping/dry cleaner bags* (4%) and *compostable/soiled paper* (3%).

Table 44. Top Ten Contaminants by Weight: Maintenance Buildings Recycling

| Material Type                         | Recoverability       | Est. Percent | Est. Tons |
|---------------------------------------|----------------------|--------------|-----------|
| Food                                  | Compostable          | 10%          | 2         |
| Loose Clean Shopping/Dry Cleaner Bags | Separated Recyclable | 4%           | 1         |
| Compostable/Soiled Paper              | Compostable          | 3%           | 0         |
| Hardcover Books                       | Separated Recyclable | 2%           | 0         |
| Other Clean Polyethylene Film         | Separated Recyclable | 2%           | 0         |
| Non-recoverable & Composite Glass     | Non-recoverable      | 1%           | 0         |
| Other Plastic Products                | Non-recoverable      | 1%           | 0         |
| Other Film                            | Non-recoverable      | 1%           | 0         |
| Non-recoverable & Composite Paper     | Non-recoverable      | 1%           | 0         |
| Non-recoverable & Composite Plastic   | Non-recoverable      | 1%           | 0         |
| <b>Top Ten Total</b>                  |                      | <b>26%</b>   | <b>4</b>  |
| Remaining Recoverable                 |                      | 2%           | 0         |
| Remaining Non-recoverable             |                      | 73%          | 13        |
| <b>Recycling Annual Tons</b>          |                      | <b>100%</b>  | <b>18</b> |

## COMPOSITION RESULTS: MAINTENANCE BUILDINGS COMPOST

This section presents composition results for the compost stream from maintenance buildings. As shown in Figure 77, compostable material is 86 percent of the stream. The remaining 14 percent of the stream is contamination, primarily non-recoverable material.

Figure 77. Annual Tons by Recoverability Category: Maintenance Buildings Compost

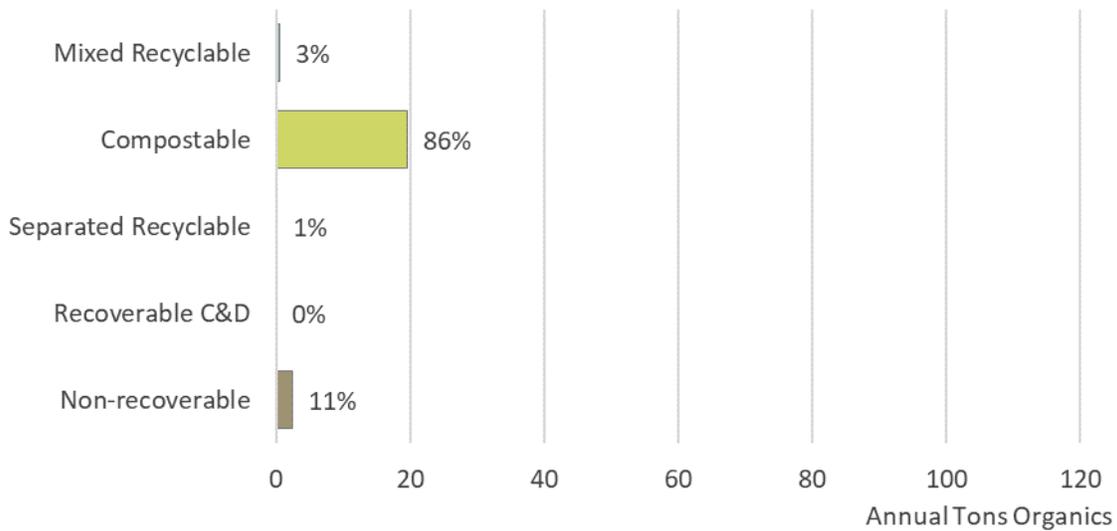


Table 45 provides more detail about the types and quantities of contaminants found in the compost stream from maintenance buildings. *Non-recoverable & composite organics* is the top contaminant by weight in the compost from maintenance buildings, accounting for 9 percent of the stream.

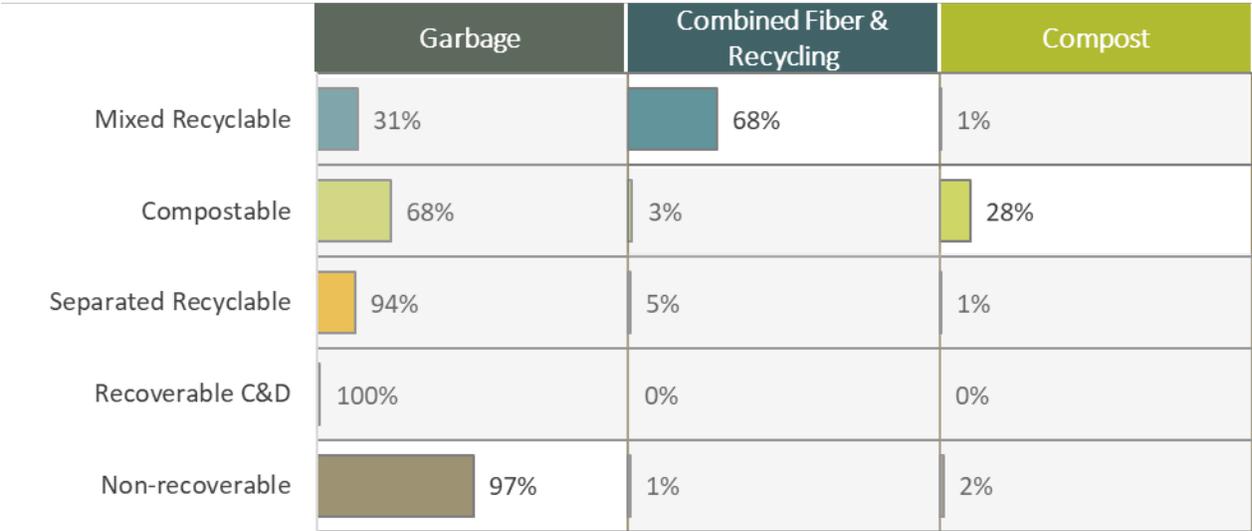
Table 45. Top Ten Contaminants by Weight: Maintenance Buildings Compost

| Material Type                                 | Recoverability       | Est. Percent | Est. Tons |
|---|----------------------|--------------|-----------|
| Non-recoverable & Composite Organics          | Non-recoverable      | 9%           | 2         |
| Mixed Low-grade Paper                         | Mixed Recyclable     | 1%           | 0         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable     | 1%           | 0         |
| Non-recoverable & Composite Paper             | Non-recoverable      | 1%           | 0         |
| Textiles                                      | Separated Recyclable | 0.3%         | 0         |
| Disposable Diapers                            | Non-recoverable      | 0.3%         | 0         |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable | 0.3%         | 0         |
| Rigid Containers                              | Mixed Recyclable     | 0.2%         | 0         |
| Tin Food Cans                                 | Mixed Recyclable     | 0.2%         | 0         |
| Other Clean Polyethylene Film                 | Separated Recyclable | 0.2%         | 0         |
| <b>Top Ten Total</b>                          |                      | <b>13%</b>   | <b>3</b>  |
| Remaining Recoverable                         |                      | 1%           | 0         |
| Remaining Non-recoverable                     |                      | 86%          | 20        |
| <b>Compost Annual Tons</b>                    |                      | <b>100%</b>  | <b>23</b> |

## OPPORTUNITIES

This section highlights areas of opportunity for additional recovery of material from maintenance buildings. Figure 78 shows the relative tonnages of material in garbage, recycling, and compost by recoverability category and the accompanying capture rates. Nearly all (97%) of the non-recoverable material is appropriately captured as garbage. Opportunities for improvement remain in getting recoverable material out of garbage, particularly compostable material—less than one-third of compostable material generated by maintenance buildings is composted and is primarily disposed of as garbage.

Figure 78. Recoverability and Actual Disposal: Maintenance Buildings



Bars report annual tons and percentages report capture of material by each stream.

Table 46 lists the top recoverable materials generated by maintenance buildings based on the tons remaining in the stream that could be but currently are not captured as compost or recycling. As shown, *food* is the material type with the most remaining tons for capture in the stream (21 tons), followed by *recyclable paper & combined fiber* (17 tons), *compostable/soiled paper* (16 tons), and *leaves/grass/prunings* (11 tons). Taken together, these materials account for approximately 84 percent of the recoverable material remaining in the stream.

Table 46. Top Recoverable Material Types: Maintenance Buildings

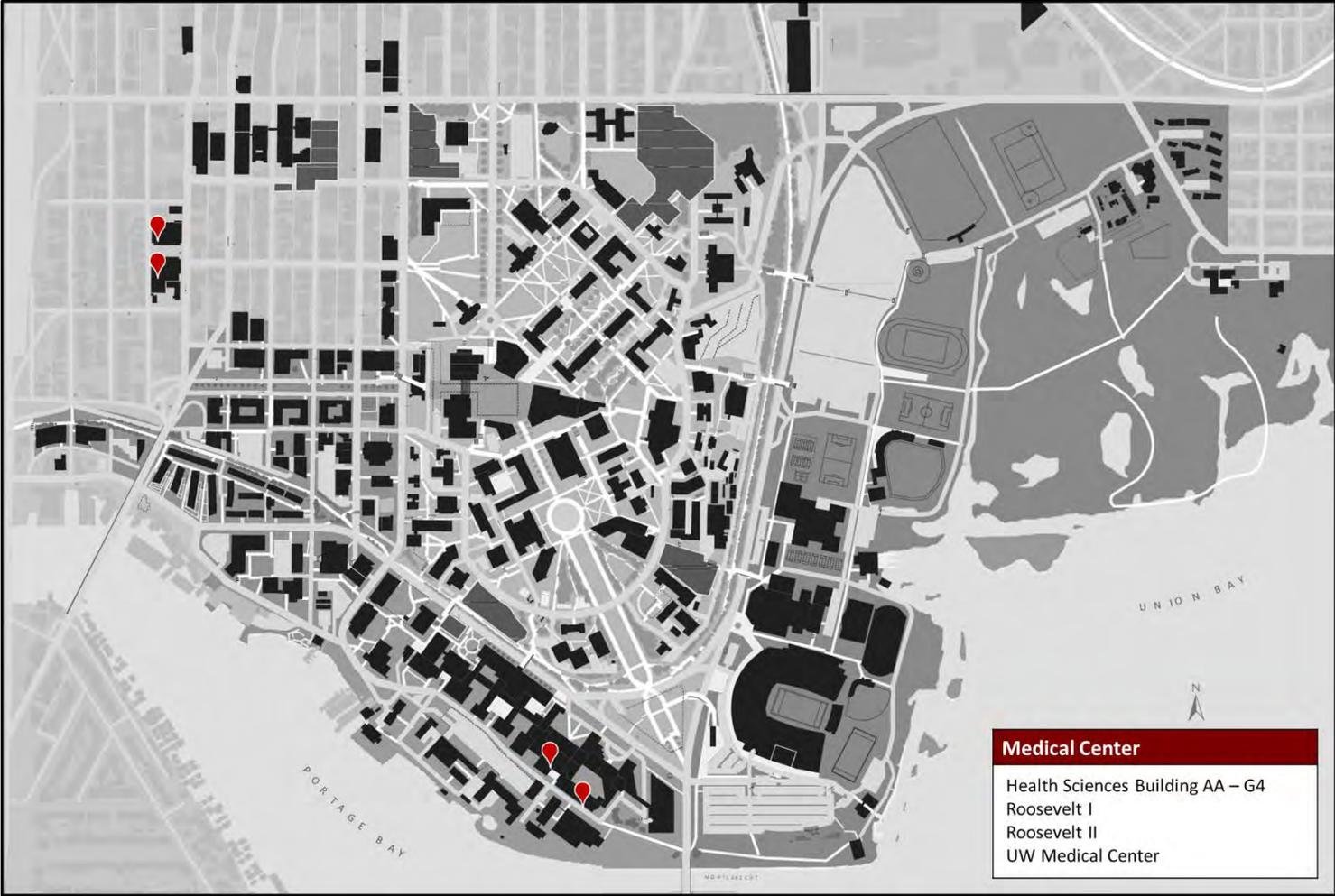
| Material Type                      | Recoverability   | Tons      |           | Capture Rate |
|------------------------------------|------------------|-----------|-----------|--------------|
|                                    |                  | Recovered | Remaining |              |
| Food                               | Compostable      | 11        | 21        | 35%          |
| Recyclable Paper & Combined Fiber* | Mixed Recyclable | 51        | 17        | 75%          |
| Compostable/Soiled Paper           | Compostable      | 8         | 16        | 32%          |
| Leaves/Grass/Prunings              | Compostable      | 0         | 11        | 0%           |
| Rigid Containers                   | Mixed Recyclable | 2         | 2         | 49%          |
| HDPE Colored Bottles & Tubs        | Mixed Recyclable | 1         | 2         | 36%          |
| PET Bottles & Containers           | Mixed Recyclable | 1         | 2         | 35%          |
| Other Ferrous                      | Mixed Recyclable | 0         | 1         | 0%           |
| Beverage Glass                     | Mixed Recyclable | 1         | 1         | 52%          |
| HDPE Natural Bottles & Tubs        | Mixed Recyclable | 0         | 1         | 27%          |
| <b>Recyclable</b>                  |                  | <b>57</b> | <b>27</b> | <b>68%</b>   |
| <b>Compostable</b>                 |                  | <b>20</b> | <b>50</b> | <b>28%</b>   |
| <b>Total Recoverable</b>           |                  | <b>76</b> | <b>77</b> | <b>50%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Medical Center

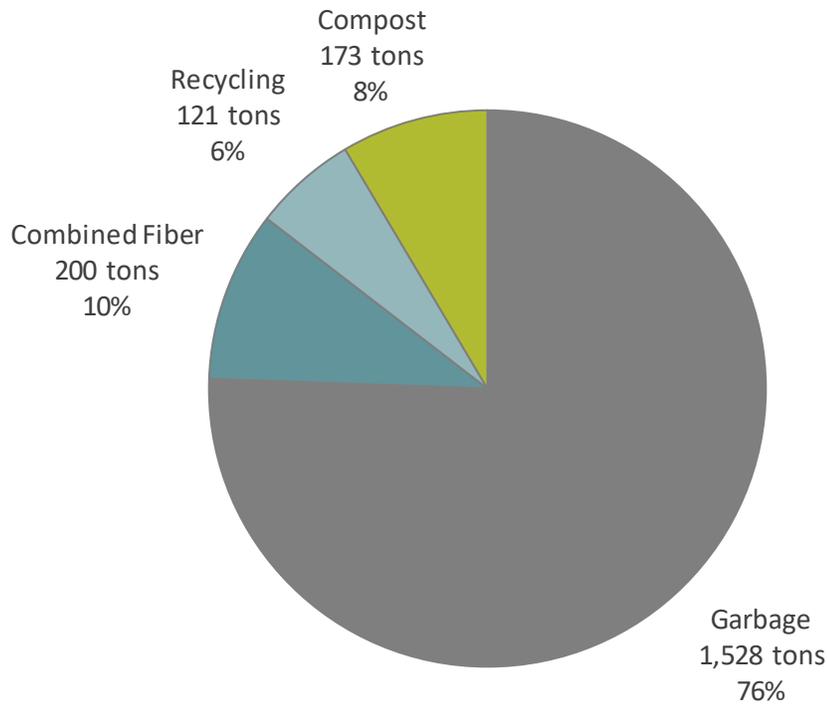
This section describes the quantities and composition of material disposed in garbage, recycling, combined fiber, and compost streams from the medical center. This generator group includes material from UW Medical Center and associated buildings, such as the Roosevelt Clinic. The map below shows all locations of collection containers for garbage, recycling, and compost from the medical center. Building names associated with collection locations are included in the legend.

Figure 79. Garbage, Recycling, and Compost Collection Locations: Medical Center



The medical center disposed of a total of 2,023 tons to garbage, recycling, combined fiber, and compost streams annually, achieving a recovery rate of 24 percent. This recovery rate is less than the overall campus recovery rate (46%). The quantities and composition of material generated by the medical center by stream are shown in Figure 80. The medical center disposes of more material by weight than any other generator group in the study, and it is among the generator groups with the largest portion of disposed material that is garbage (second only to Outdoor Litter Receptacles: Smart Cans).

Figure 80. Annual Tons by Stream: Medical Center



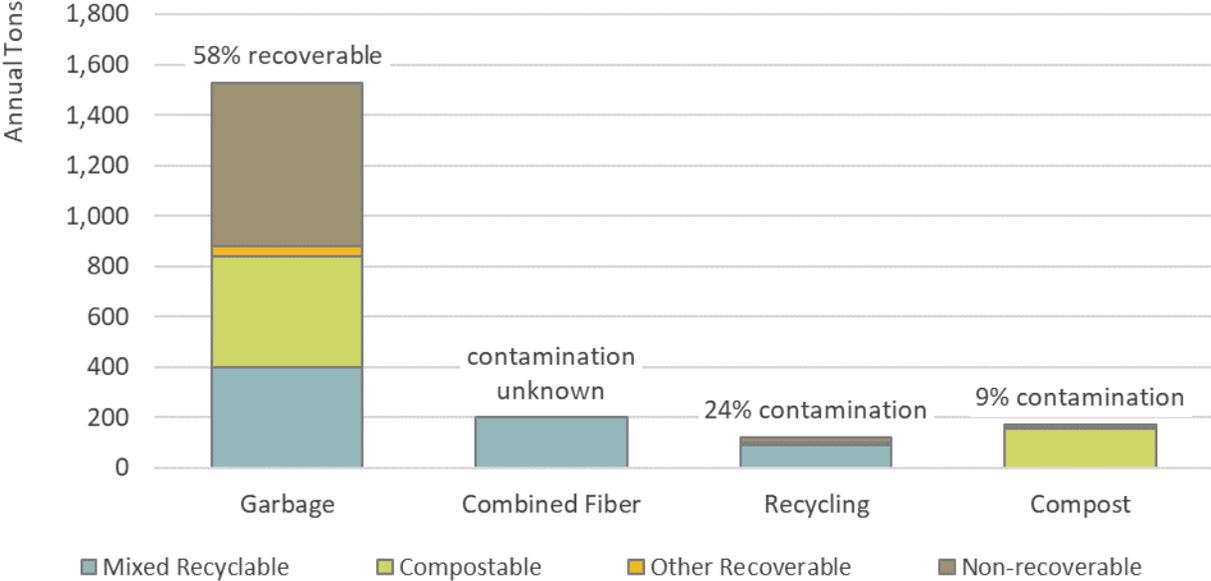
The table below compares the annual garbage disposal and the disposal rate normalized to patient count and building size for the current and 2003 study. As shown, total garbage disposal from the medical center decreased by 9 percent since 2003, even as the patient count increased by 2 percent and associated building area grew by nearly four times its previous size (388% increase).

Table 47. Comparison of Garbage Disposal Rates (2003 and 2018): Medical Center

|                                  | 2003         | 2018         | % diff     |
|----------------------------------|--------------|--------------|------------|
| <b>Medical Center (tons/yr.)</b> | <b>1,688</b> | <b>1,528</b> | <b>-9%</b> |
| Patients                         | 330,298      | 338,399      | 2%         |
| lbs./100 patients/yr.            | 1,022        | 903          | -12%       |
| Building Area (1,000 sq. ft.)    | 436          | 2,125        | 388%       |
| lbs./1,000 sq. ft.               | 7,744        | 1,438        | -81%       |

Figure 81 shows the quantity and percentage of material in garbage that is recoverable, along with the quantity and percentage of material in the recycling and compost that is contamination. Over one-half (58%) of material in the garbage is recoverable. Nearly one-quarter (24%) of material in the recycling is contamination, which is 2 percentage points less than the overall campus contamination rate (26%). Of material in the compost, 9 percent is contamination, slightly more than the overall campus contamination rate (8%).

Figure 81. Recoverability and Contamination by Stream: Medical Center



The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.

Figure 82 displays the percentages of material generated by the medical center by material class. The data shown include all material disposed in the garbage, recycling, combined fiber, and compost streams. Over half (61%) of the material generated by the medical center is paper & combined fiber. The next largest material classes are plastics (23%) and organics (10%). Compared to other generator groups in the study, the medical center has highest proportion of its waste generation by material class that is plastics.

Figure 82. Annual Tons by Material Class, All Streams: Medical Center

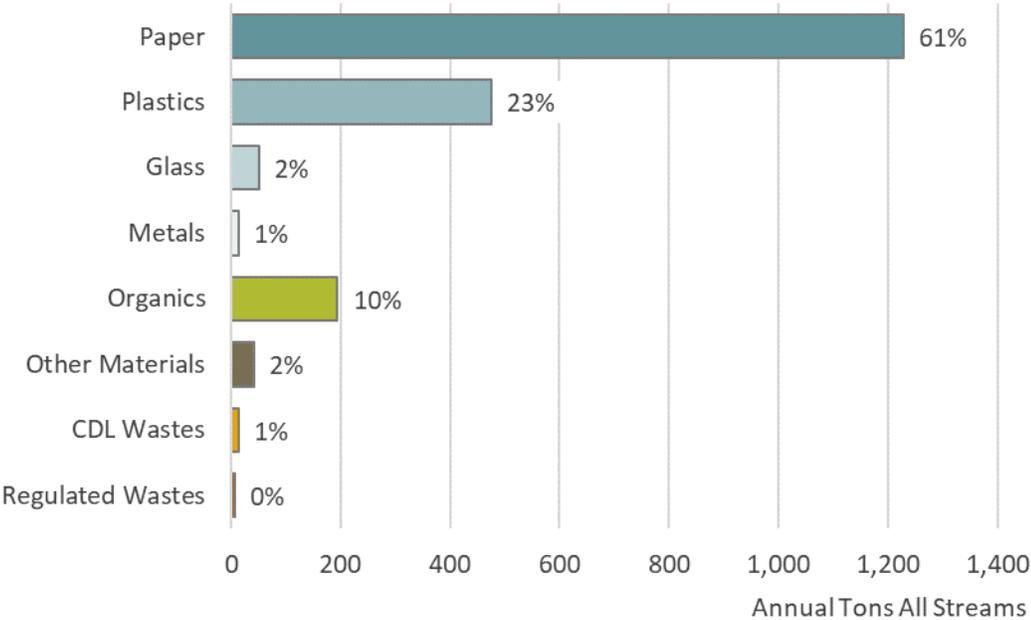
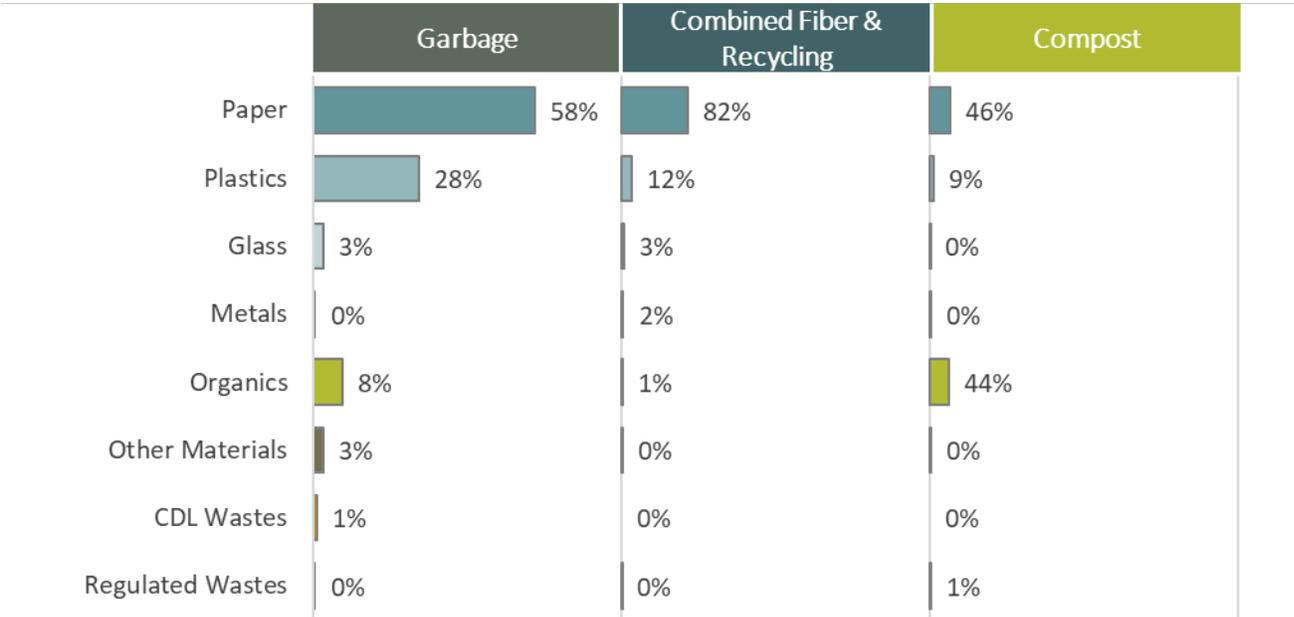


Figure 83 further breaks down the percentage of material generated by the medical center by stream and material class.

- ▶ The largest material classes found in the garbage are paper (58%) and plastics (28%).
- ▶ 82 percent of material going into the combined fiber and recycling streams is paper.
- ▶ Two material classes account for 90 percent of the material in the compost: paper (46%) and organics (44%).

Figure 83. Annual Tons by Material Class and Stream: Medical Center



Bars report annual tons and percentages report class composition for each stream.

Table 48 lists the top ten material types generated by the medical center by weight, excluding the combined fiber stream. The most prevalent material types are *compostable/soiled paper* (22%) and *mixed low-grade paper* (18%). The medical center generator group had the second-lowest percentage of its disposal across all streams that was food (11%); however, because the medical center is one of the top generators of material overall, the medical center also remains among the top generators of food by weight. This generator group has a number of non-recoverable material types in its top ten material types by weight, including *draping/sterile wrap/gowns* and *lab glass*.

Table 48. Top Ten Material Types by Weight, All Streams: Medical Center

| Material Type                       | Recoverability   | Est. Percent | Est. Tons    |
|-------------------------------------|------------------|--------------|--------------|
| Compostable/Soiled Paper            | Compostable      | 22%          | 396          |
| Mixed Low-grade Paper               | Mixed Recyclable | 18%          | 329          |
| Food                                | Compostable      | 11%          | 192          |
| Non-recoverable & Composite Paper   | Non-recoverable  | 11%          | 191          |
| Other Film                          | Non-recoverable  | 8%           | 146          |
| Non-recoverable & Composite Plastic | Non-recoverable  | 3%           | 57           |
| Draping/Sterile Wrap/Gowns          | Non-recoverable  | 3%           | 48           |
| Plain OCC/Kraft Paper               | Mixed Recyclable | 3%           | 47           |
| Lab Glass                           | Non-recoverable  | 2%           | 40           |
| Other Plastic Products              | Non-recoverable  | 2%           | 39           |
| <b>Top Ten Total</b>                |                  | <b>81%</b>   | <b>1,485</b> |
| Remaining Recoverable               |                  | 10%          | 188          |
| Remaining Non-recoverable           |                  | 8%           | 150          |
| <b>Generation Annual Tons</b>       |                  | <b>100%</b>  | <b>1,822</b> |

## COMPOSITION RESULTS: MEDICAL CENTER GARBAGE

This section presents the quantity and composition of material for garbage from the medical center. Figure 84 shows the material found in the garbage by recoverability category. Over half (55%) of material in the garbage is recoverable through recycling (26%) or compost (29%) streams.

Figure 84. Annual Tons by Recoverability Category: Medical Center Garbage

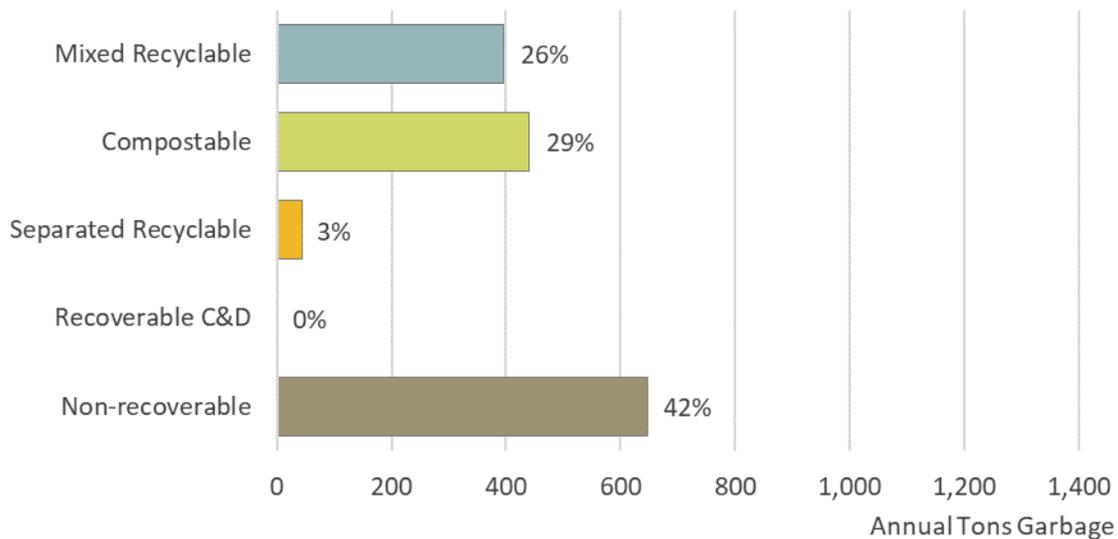


Table 49 shows the top ten material types present in medical center garbage by weight. The two most prevalent material types, *compostable/soiled paper* (21%) and *mixed low-grade paper* (20%), are both recoverable through composting or recycling.

Table 49. Top Ten Material Types by Weight: Medical Center Garbage

| Material Type                       | Recoverability   | Est. Percent | Est. Tons    |
|-------------------------------------|------------------|--------------|--------------|
| Compostable/Soiled Paper            | Compostable      | 21%          | 320          |
| Mixed Low-grade Paper               | Mixed Recyclable | 20%          | 301          |
| Non-recoverable & Composite Paper   | Non-recoverable  | 12%          | 190          |
| Other Film                          | Non-recoverable  | 9%           | 139          |
| Food                                | Compostable      | 7%           | 114          |
| Non-recoverable & Composite Plastic | Non-recoverable  | 4%           | 56           |
| Draping/Sterile Wrap/Gowns          | Non-recoverable  | 3%           | 47           |
| Lab Glass                           | Non-recoverable  | 3%           | 40           |
| Non-recoverable Rigid Packaging     | Non-recoverable  | 2%           | 34           |
| Other Plastic Products              | Non-recoverable  | 2%           | 31           |
| <b>Top Ten Total</b>                |                  | <b>83%</b>   | <b>1,273</b> |
| Remaining Recoverable               |                  | 9%           | 145          |
| Remaining Non-recoverable           |                  | 7%           | 110          |
| <b>Garbage Annual Tons</b>          |                  | <b>100%</b>  | <b>1,528</b> |

## COMPOSITION RESULTS: MEDICAL CENTER RECYCLING

This section describes the composition of material found in the medical center’s recycling. As shown in Figure 85, mixed recyclable material (76%) is over three-quarters of the recycling stream. The remaining materials are contaminants in the recycling stream.

Figure 85. Annual Tons by Recoverability Category: Medical Center Recycling

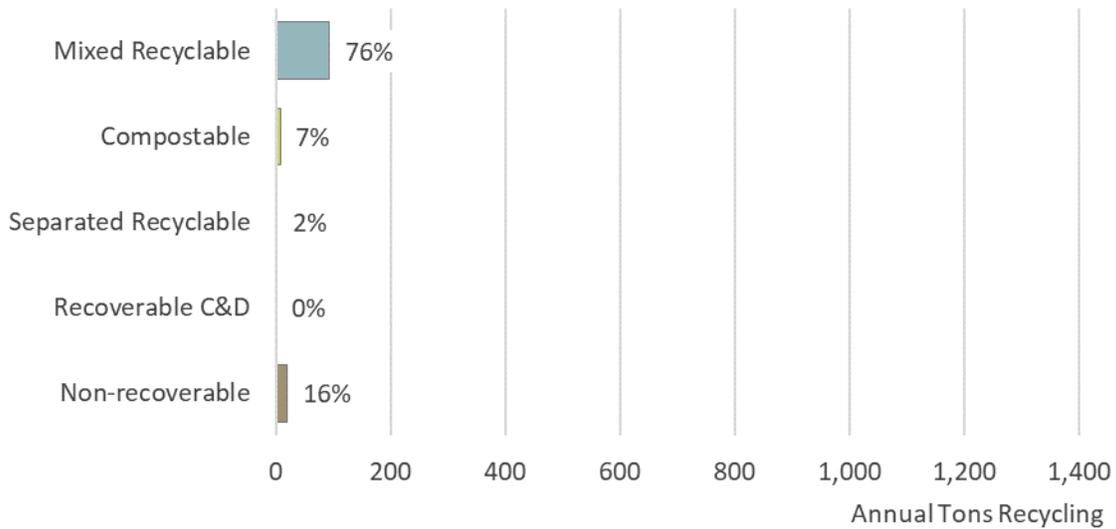


Table 50 presents the top ten contaminants found in the recycling by weight. The most prevalent material types by weight are *other plastic products* (6%), *other film* (5%), and *compostable/soiled paper* (4%).

Table 50. Top Ten Contaminants by Weight: Medical Center Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons  |
|--|----------------------|--------------|------------|
| Other Plastic Products                       | Non-recoverable      | 6%           | 7          |
| Other Film                                   | Non-recoverable      | 5%           | 6          |
| Compostable/Soiled Paper                     | Compostable          | 4%           | 5          |
| Respiratory Hoses                            | Non-recoverable      | 2%           | 2          |
| Food   | Compostable          | 1%           | 2          |
| Other Clean Polyethylene Film                | Separated Recyclable | 1%           | 2          |
| Non-recoverable & Composite Plastic          | Non-recoverable      | 1%           | 1          |
| Non-recoverable & Composite Paper            | Non-recoverable      | 0.4%         | 1          |
| Compostable Single-use Food Service Plastics | Compostable          | 0.4%         | 0          |
| Waxed OCC/Kraft Paper                        | Compostable          | 0.4%         | 0          |
| <b>Top Ten Total</b>                         |                      | <b>22%</b>   | <b>26</b>  |
| Remaining Recoverable                        |                      | 2%           | 3          |
| Remaining Non-recoverable                    |                      | 76%          | 92         |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>121</b> |

## COMPOSITION RESULTS: MEDICAL CENTER COMPOST

This section shows the quantity and composition of material found in the medical center’s compost stream. As shown in Figure 86, 91 percent of compost from the medical center is compostable, with the remaining stream composed of mixed recyclable material (6%) and non-recoverable material (2%).

Figure 86. Annual Tons by Recoverability Category: Medical Center Compost

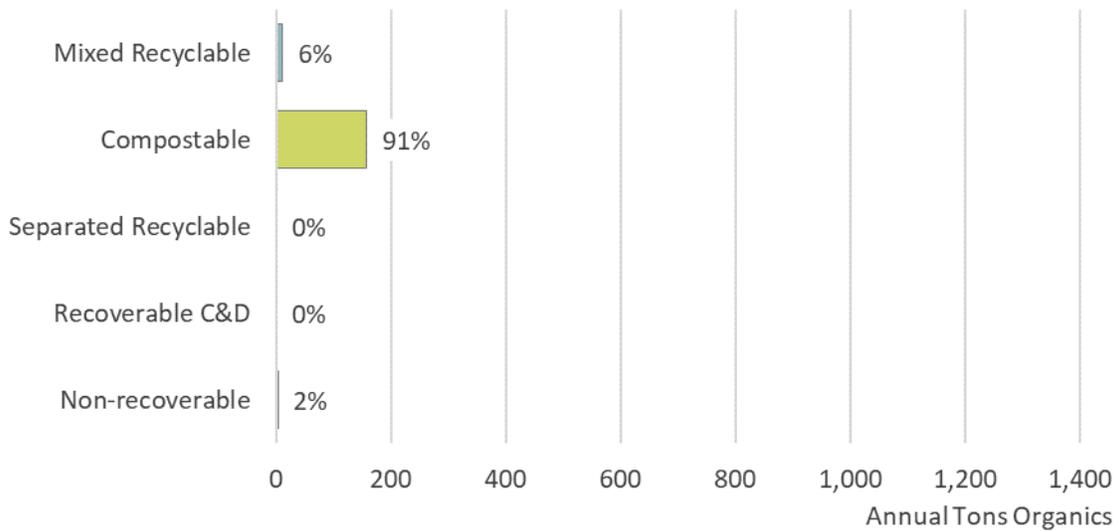


Table 51 lists the top ten contaminants in compost from the medical center. The most prevalent contaminants are *mixed low-grade paper* (3%) and *non-compostable single-use food service paper* (2%).

Table 51. Top Ten Contaminants by Weight: Medical Center Compost

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons  |
|---|------------------|--------------|------------|
| Mixed Low-grade Paper                         | Mixed Recyclable | 3%           | 4          |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 2%           | 3          |
| Rigid Containers                              | Mixed Recyclable | 1%           | 1          |
| Clear & Orange Bag Medical Waste              | Non-recoverable  | 1%           | 1          |
| Non-recoverable & Composite Paper             | Non-recoverable  | 0.4%         | 1          |
| PET Bottles & Containers                      | Mixed Recyclable | 0.4%         | 1          |
| Other Film                                    | Non-recoverable  | 0.4%         | 1          |
| Latex/Nitrile Gloves                          | Non-recoverable  | 0.3%         | 1          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable | 0.3%         | 0          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable | 0.2%         | 0          |
| <b>Top Ten Total</b>                          |                  | <b>7%</b>    | <b>13</b>  |
| Remaining Recoverable                         |                  | 2%           | 3          |
| Remaining Non-recoverable                     |                  | 91%          | 157        |
| <b>Compost Annual Tons</b>                    |                  | <b>100%</b>  | <b>173</b> |

## OPPORTUNITIES

This section presents opportunities to increase recovery of disposed material from the medical center. As shown in Figure 87, nearly three-quarters (73%) of compostable material that is generated by the medical center is going in the garbage rather than the compost, and this compostable material is a relatively large portion of the garbage stream by weight. Recovering compostable material from garbage represents an opportunity to increase medical center recovery rates through existing and readily available programs on campus. For mixed recyclable material, over half (57%) of material going into the garbage could be recycled through the medical center’s combined fiber and recycling streams.

Figure 87. Recoverability and Actual Disposal: Medical Center

|                      | Garbage | Combined Fiber & Recycling | Compost |
|----------------------|---------|----------------------------|---------|
| Mixed Recyclable     | 57%     | 42%                        | 2%      |
| Compostable          | 73%     | 1%                         | 26%     |
| Separated Recyclable | 94%     | 4%                         | 2%      |
| Recoverable C&D      |         |                            |         |
| Non-recoverable      | 97%     | 3%                         | 1%      |

Bars report annual tons and percentages report capture of material by each stream.

Table 52 shows the materials with the greatest potential for recovery, ordered by tons of material that are not currently recovered through recycling or compost. These materials' capture rates also reflect opportunities to recover more material. *Recyclable paper & combined fiber* have the most tons remaining for recovery. Currently, 40 percent of *recyclable paper & combined fiber* is captured through campus combined fiber or recycling streams, leaving 60 percent available for recovery. *Compostable/soiled paper* has the next most tons remaining for recovery, and its low capture rate demonstrates that this is an opportunity area for the medical center to increase its recovery rate. Currently, less than one-fifth (18%) percent of *compostable/soiled paper* is collected through the composting program, with the remainder disposed of as garbage or as a contaminant to recycling. The recovery of *food* could also be increased from medical centers—39 percent of *food* is captured in compost, leaving potential for the remaining 61 percent (116 tons) to be recovered through composting.

Table 52. Top Recoverable Material Types: Medical Center

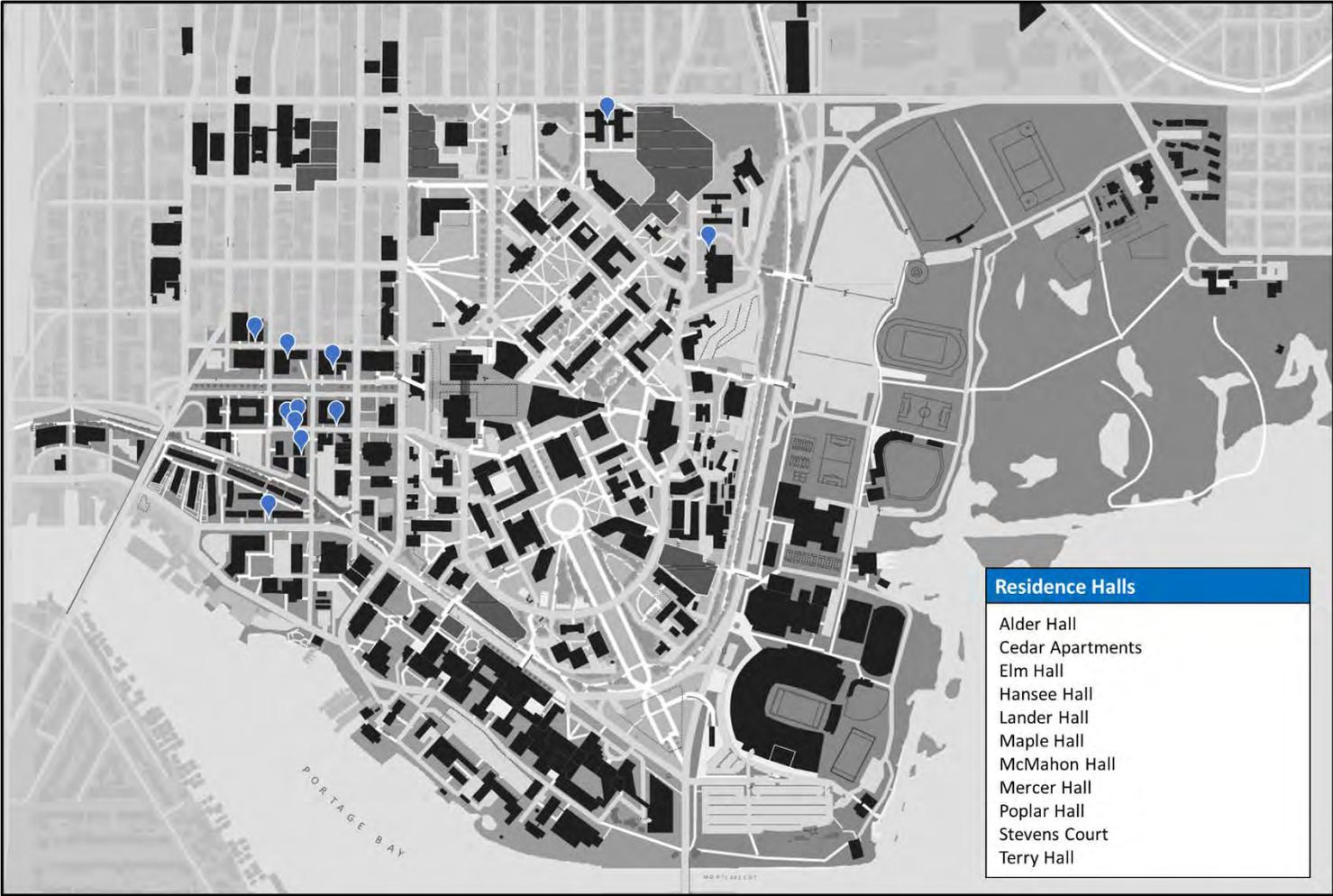
| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 258            | 382            | 40%          |
| Compostable/Soiled Paper                     | Compostable      | 70             | 326            | 18%          |
| Food   | Compostable      | 76             | 116            | 39%          |
| Rigid Containers                             | Mixed Recyclable | 4              | 11             | 27%          |
| PET Bottles & Containers                     | Mixed Recyclable | 5              | 6              | 45%          |
| Compostable Single-use Food Service Plastics | Compostable      | 5              | 5              | 50%          |
| Aluminum Cans                                | Mixed Recyclable | 3              | 4              | 45%          |
| Other Ferrous                                | Mixed Recyclable | 0              | 2              | 1%           |
| HDPE Colored Bottles & Tubs                  | Mixed Recyclable | 5              | 2              | 75%          |
| Leaves/Grass/Prunings                        | Compostable      | 0              | 1              | 6%           |
| <b>Recyclable</b>                            |                  | <b>293</b>     | <b>408</b>     | <b>42%</b>   |
| <b>Compostable</b>                           |                  | <b>157</b>     | <b>449</b>     | <b>26%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>450</b>     | <b>857</b>     | <b>34%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Residence Halls

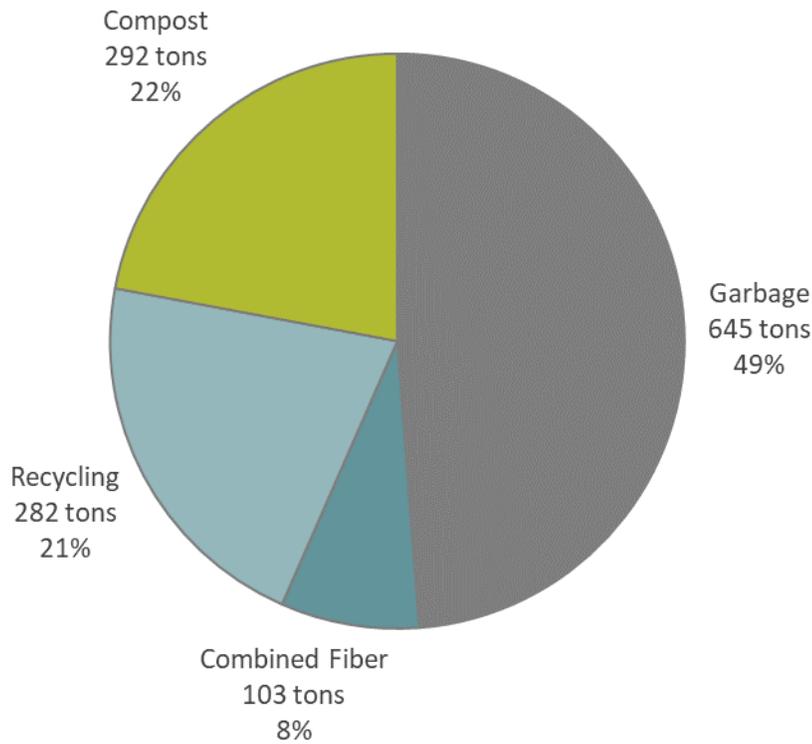
This section describes key findings about the quantity and composition of material disposed to garbage, recycling, combined fiber, and compost streams from residence halls. This section presents findings for all materials generated by residence halls on UW’s main Seattle campus. Resident halls include material from UW Housing & Food Services, including student housing, apartments, and associated food service facilities. The map below shows all locations of collection containers for garbage, recycling, and compost associated with residence halls.

Figure 88. Garbage, Recycling, and Compost Collection Locations: Residence Halls



Residence halls disposed of 1,322 tons of material and achieved a 51 percent recovery rate during the one-year study period. Figure 89 shows the composition and quantities of materials from residence halls by stream.

Figure 89. Annual Tons by Stream: Residence Halls



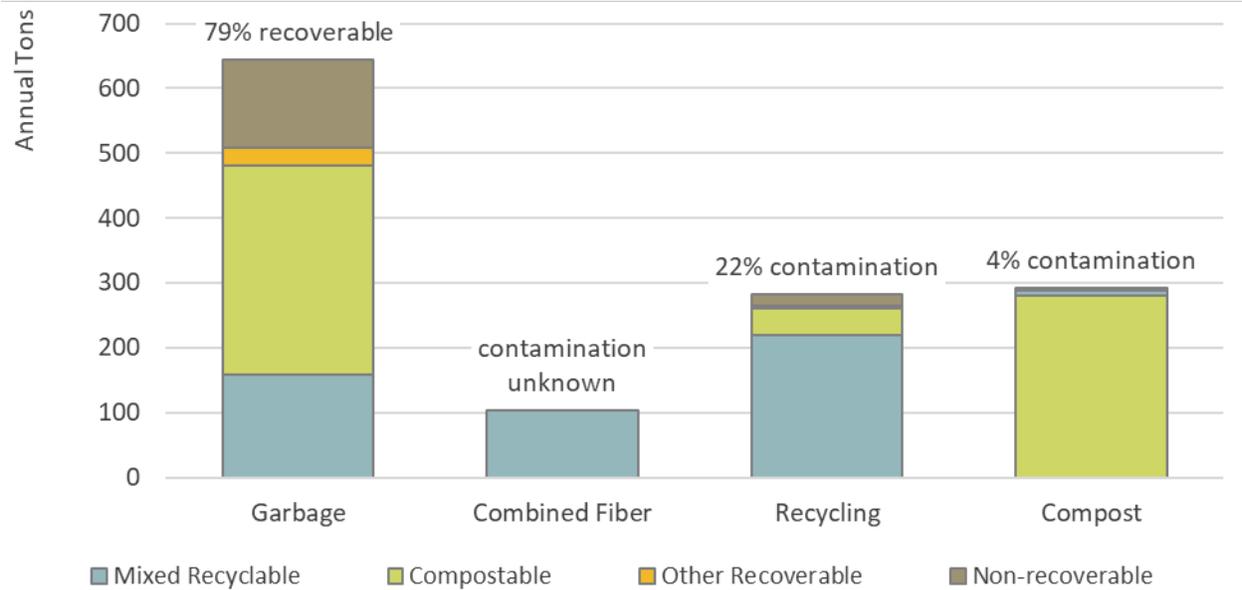
The table below compares the annual garbage disposal and the disposal rate normalized to student occupancy and building size for the 2003 and current study. As shown, total garbage disposal from residence halls decreased by 75 percent since 2003, even as the student occupancy increased by 76 percent and associated building area increased by 46 percent.

Table 53. Comparison of Garbage Disposal Rates (2003 and 2018): Residence Halls

|                                   | 2003         | 2018       | % diff      |
|-----------------------------------|--------------|------------|-------------|
| <b>Residence Halls (tons/yr.)</b> | <b>2,566</b> | <b>645</b> | <b>-75%</b> |
| Student Occupancy                 | 4,934        | 8,672      | 76%         |
| lbs./student/yr.                  | 1,040        | 149        | -86%        |
| Building Area (1,000 sq. ft.)     | 8,009        | 11,720     | 46%         |
| lbs./1,000 sq. ft.                | 641          | 110        | -83%        |

Figure 90 summarizes the recoverability of materials in garbage and the contamination in combined fiber, recycling, and compost from residence halls. As shown, nearly 80 percent of garbage from residence halls is recoverable and primarily compostable. Recycling contamination is over one-fifth (22%) of material collected for recycling from residence halls. Both recycling and compost contamination rates are lower in residence halls than they are for the campus overall. Compared to the other generator groups included in the study, residence halls have the lowest rate of compost contamination and the second-lowest rate of recycling contamination. However, it also has the second highest percentage of recoverable material in the garbage streams.

Figure 90. Recoverability and Contamination by Stream: Residence Halls



The combined fiber stream was not sampled and sorted as part of this study, so the contamination rate for this stream is unknown. However, collected tonnages (as reported by UW) are included in the analysis because it represents a significant portion of material recovered on campus.

The figure below (Figure 91) shows the quantities and composition of materials generated from residence halls by material class. The data include all material disposed in the garbage, recycling, combined fiber, and compost. Residence halls primarily generate paper (46% of all material), organics (29%), and plastics (16%).

Figure 91. Annual Tons by Material Class, All Streams: Residence Halls

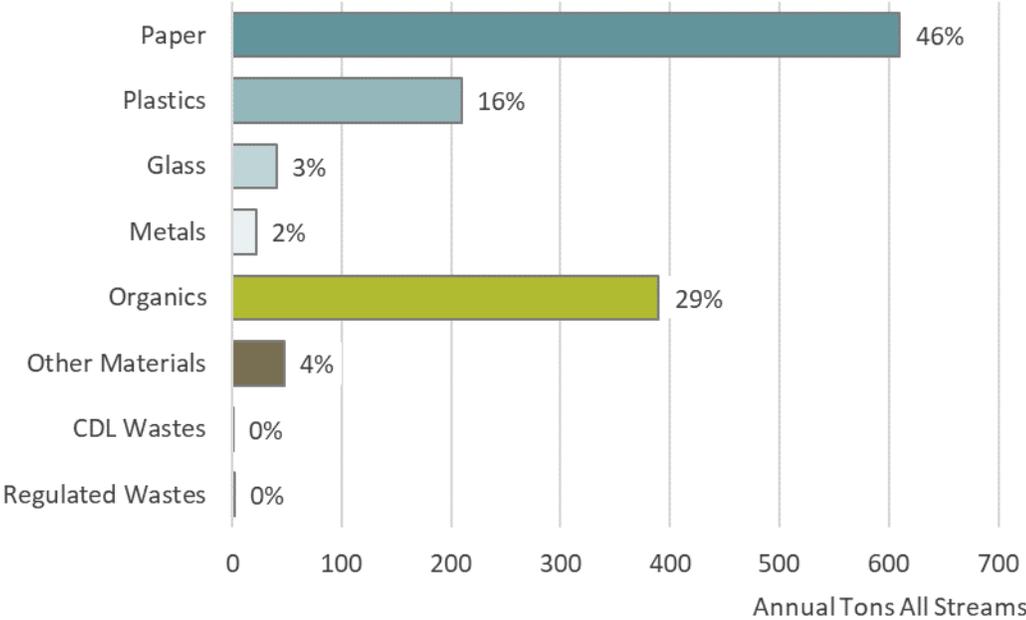
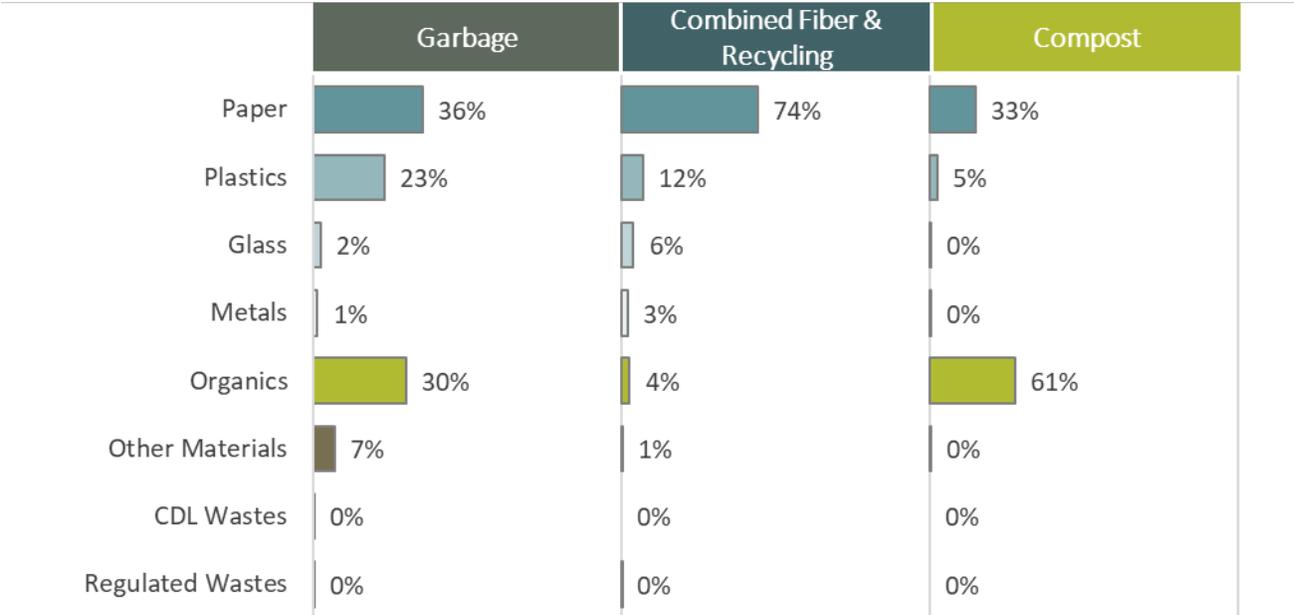


Figure 92 shows the composition of material from residence halls by material class and stream.

- ▶ Paper (36%), organics (30%), and plastics (23%) are the largest material classes in garbage, together representing nearly 90 percent of the stream.
- ▶ Paper is nearly three-quarters (74%) of the combined fiber and recycling streams.
- ▶ Organics are 61 percent of compost, and paper is another one-third (33%) of the stream.

Figure 92. Annual Tons by Material Class and Stream: Residence Halls



Bars report annual tons and percentages report class composition for each stream.

Table 54 lists the most prevalent materials generated by residence halls by weight, excluding the combined fiber stream. The top three materials are *food*, *compostable/soiled paper*, and *plain OCC/Kraft paper*, together accounting for over three-fifths (62%) of residence hall generation.

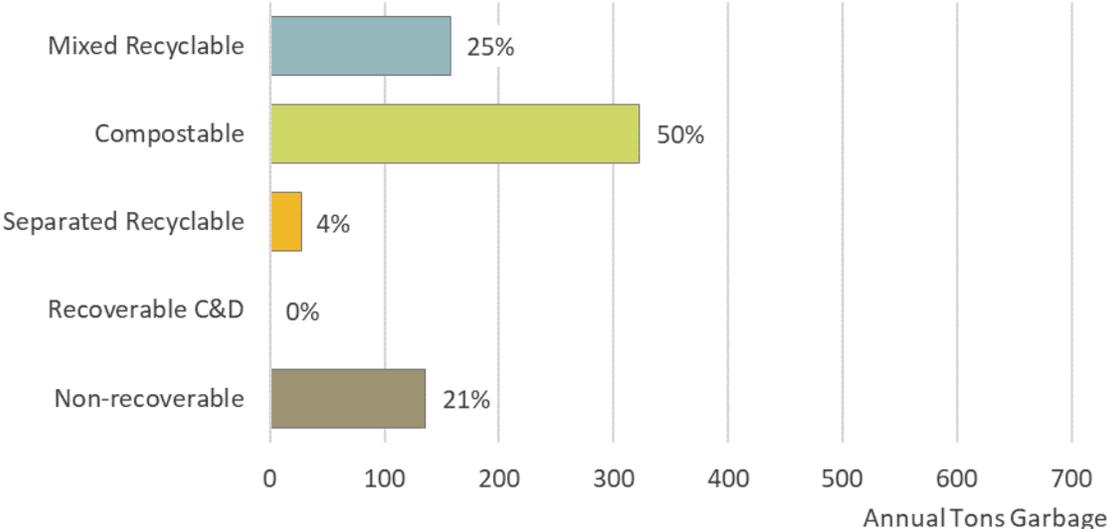
Table 54. Top Ten Material Types by Weight, All Streams: Residence Halls

| Material Type                                | Recoverability   | Est. Percent | Est. Tons    |
|--|------------------|--------------|--------------|
| Food   | Compostable      | 31%          | 378          |
| Compostable/Soiled Paper                     | Compostable      | 20%          | 238          |
| Plain OCC/Kraft Paper                        | Mixed Recyclable | 11%          | 135          |
| Mixed Low-grade Paper                        | Mixed Recyclable | 8%           | 91           |
| Other Film                                   | Non-recoverable  | 5%           | 67           |
| Beverage Glass                               | Mixed Recyclable | 3%           | 37           |
| PET Bottles & Containers                     | Mixed Recyclable | 2%           | 30           |
| Rigid Containers                             | Mixed Recyclable | 2%           | 27           |
| Disposable Diapers                           | Non-recoverable  | 2%           | 22           |
| Compostable Single-use Food Service Plastics | Compostable      | 1%           | 17           |
| <b>Top Ten Total</b>                         |                  | <b>86%</b>   | <b>1,042</b> |
| Remaining Recoverable                        |                  | 9%           | 109          |
| Remaining Non-recoverable                    |                  | 6%           | 67           |
| <b>Generation Annual Tons</b>                |                  | <b>100%</b>  | <b>1,219</b> |

## COMPOSITION RESULTS: RESIDENCE HALLS GARBAGE

This section presents findings on the quantities and composition of garbage from residence halls. As shown in Figure 93, half (50%) of the garbage from residence halls is compostable and one-quarter (25%) is mixed recyclable material.

Figure 93. Annual Tons by Recoverability Category: Residence Halls Garbage



The table below shows the top ten materials in garbage from residence halls by weight. As shown in Table 55, *food* and *compostable/soiled paper* are nearly half (48%) of the stream and could be recovered if placed in compost instead of garbage. Other common materials in the garbage are *mixed low-grade paper* and *other film*, each 9 percent of the stream.

Table 55. Top Ten Material Types by Weight: Residence Halls Garbage

| Material Type                 | Recoverability       | Est. Percent | Est. Tons  |
|-------------------------------|----------------------|--------------|------------|
| Food                          | Compostable          | 28%          | 184        |
| Compostable/Soiled Paper      | Compostable          | 20%          | 127        |
| Mixed Low-grade Paper         | Mixed Recyclable     | 9%           | 60         |
| Other Film                    | Non-recoverable      | 9%           | 58         |
| Plain OCC/Kraft Paper         | Mixed Recyclable     | 4%           | 25         |
| Rigid Containers              | Mixed Recyclable     | 3%           | 22         |
| Disposable Diapers            | Non-recoverable      | 3%           | 21         |
| PET Bottles & Containers      | Mixed Recyclable     | 2%           | 15         |
| Beverage Glass                | Mixed Recyclable     | 2%           | 13         |
| Other Clean Polyethylene Film | Separated Recyclable | 2%           | 11         |
| Top Ten Total                 |                      | 83%          | 533        |
| Remaining Recoverable         |                      | 8%           | 54         |
| Remaining Non-recoverable     |                      | 9%           | 57         |
| <b>Garbage Annual Tons</b>    |                      | <b>100%</b>  | <b>645</b> |

## COMPOSITION RESULTS: RESIDENCE HALLS RECYCLING

This section summarizes composition results for recycling from residence halls. Figure 94 shows the quantity and composition of recycling from residence halls by recoverability category. Over three-quarters (78%) of the recycling stream is mixed recyclable material. Over one-tenth (15%) of the stream is compostable material and is considered a contaminant in the recycling.

Figure 94. Annual Tons by Recoverability Category: Residence Halls Recycling

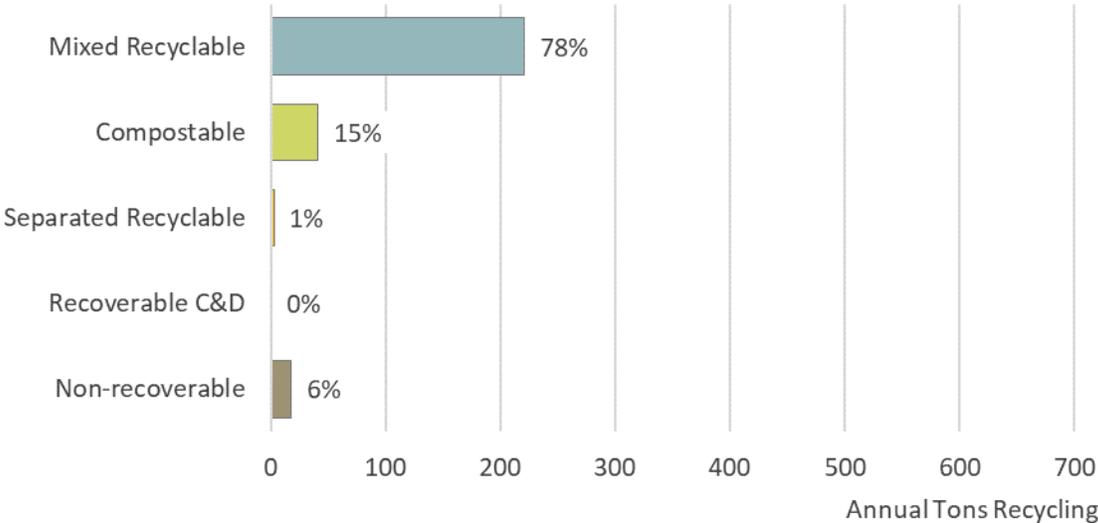


Table 56 provides more detail about contaminants in recycling from residence halls. The top contaminants by weight are *compostable/soiled paper* (8%), *food* (6%), and *other film* (3%). Overall, over one-fifth (22%) of recycling from residence halls is contamination.

Table 56. Top Ten Contaminants by Weight: Residence Halls Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons  |
|--|----------------------|--------------|------------|
| Compostable/Soiled Paper                     | Compostable          | 8%           | 22         |
| Food   | Compostable          | 6%           | 16         |
| Other Film                                   | Non-recoverable      | 3%           | 9          |
| Compostable Single-use Food Service Plastics | Compostable          | 1%           | 2          |
| Latex/Nitrile Gloves                         | Non-recoverable      | 1%           | 2          |
| Fines & Miscellaneous                        | Non-recoverable      | 1%           | 2          |
| Other Clean Polyethylene Film                | Separated Recyclable | 1%           | 2          |
| Other Plastic Products                       | Non-recoverable      | 1%           | 2          |
| Non-recoverable & Composite Paper            | Non-recoverable      | 1%           | 2          |
| Non-recoverable & Composite Plastic          | Non-recoverable      | 0.4%         | 1          |
| Top Ten Total                                |                      | 21%          | 59         |
| Remaining Recoverable                        |                      | 1%           | 3          |
| Remaining Non-recoverable                    |                      | 78%          | 220        |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>282</b> |

## COMPOSITION RESULTS: RESIDENCE HALLS COMPOST

This section presents findings about the composition and quantities of the compost stream from residence halls. As shown in Figure 95, compostable material is 96 percent of the material collected as compost at residence halls. The remaining 4 percent is contaminant material.

Figure 95. Annual Tons by Recoverability Category: Residence Halls Compost

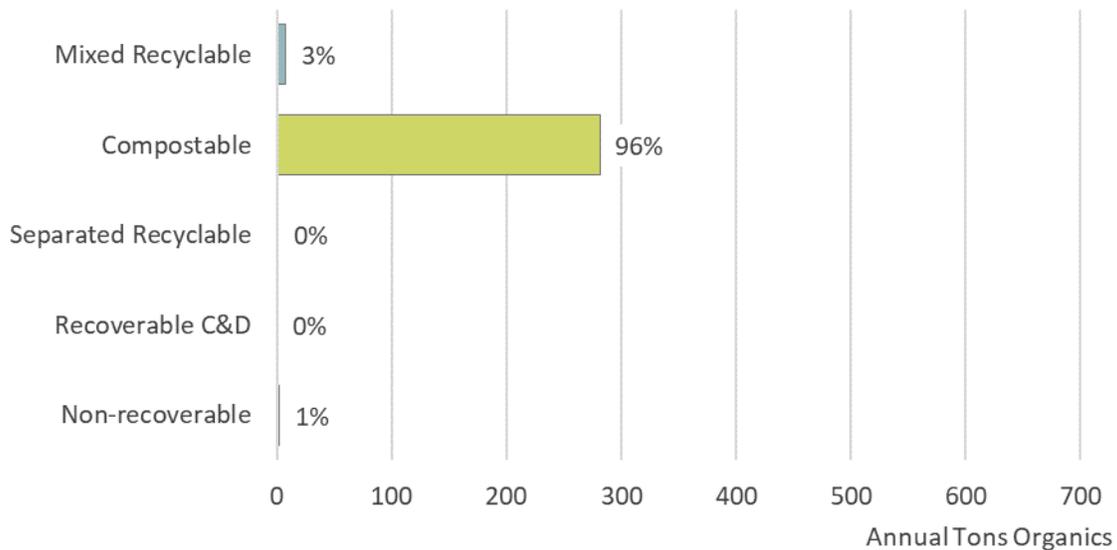


Table 57 lists the top contaminant materials in the compost stream from residence halls by weight. As shown, *mixed low-grade paper* is the most prevalent contaminant, accounting for 1 percent of the stream. Other common contaminants are *non-compostable single-use food service paper* (0.4%), *rigid containers* (0.4%), and *PET bottles & container* (0.3%).

Table 57. Top Ten Contaminants by Weight: Residence Halls Compost

| Material Type                                 | Recoverability       | Est. Percent | Est. Tons  |
|---|----------------------|--------------|------------|
| Mixed Low-grade Paper                         | Mixed Recyclable     | 1%           | 3          |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable     | 0.4%         | 1          |
| Rigid Containers                              | Mixed Recyclable     | 0.4%         | 1          |
| PET Bottles & Containers                      | Mixed Recyclable     | 0.3%         | 1          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable     | 0.2%         | 1          |
| Other Film                                    | Non-recoverable      | 0.2%         | 1          |
| Other Clean Polyethylene Film                 | Separated Recyclable | 0.1%         | 0          |
| Disposable Diapers                            | Non-recoverable      | 0.1%         | 0          |
| Latex/Nitrile Gloves                          | Non-recoverable      | 0.1%         | 0          |
| Textiles                                      | Separated Recyclable | 0.1%         | 0          |
| <b>Top Ten Total</b>                          |                      | <b>3%</b>    | <b>9</b>   |
| Remaining Recoverable                         |                      | 1%           | 2          |
| Remaining Non-recoverable                     |                      | 96%          | 281        |
| <b>Compost Annual Tons</b>                    |                      | <b>100%</b>  | <b>292</b> |

## OPPORTUNITIES

This section highlights opportunities for recovery of materials from residence halls. Figure 96 shows the relative quantities of material in each stream and capture rates by recoverability category. As shown, capture rates for mixed recyclables combined fiber and recycling are 66 percent. Capture rates for compostable materials are 44 percent, meaning that less than half of compostable material generated from residence halls is collected for recovery.

Figure 96. Recoverability and Actual Disposal: Residence Halls

|                      | Garbage | Combined Fiber & Recycling | Compost |
|----------------------|---------|----------------------------|---------|
| Mixed Recyclable     | 32%     | 66%                        | 2%      |
| Compostable          | 50%     | 6%                         | 44%     |
| Separated Recyclable | 88%     | 9%                         | 3%      |
| Recoverable C&D      | 100%    | 0%                         | 0%      |
| Non-recoverable      | 87%     | 11%                        | 1%      |

Bars report annual tons and percentages report capture of material by each stream.

Table 58 shows the top ten recoverable materials generated by residence halls by the tonnage of material remaining that *could* be but is not currently captured through current programs on campus. As shown, the biggest opportunities are *food* and *compostable/soiled paper*, which together have nearly 350 tons of material that could be recovered through the compost stream.

Table 58. Top Recoverable Material Types: Residence Halls

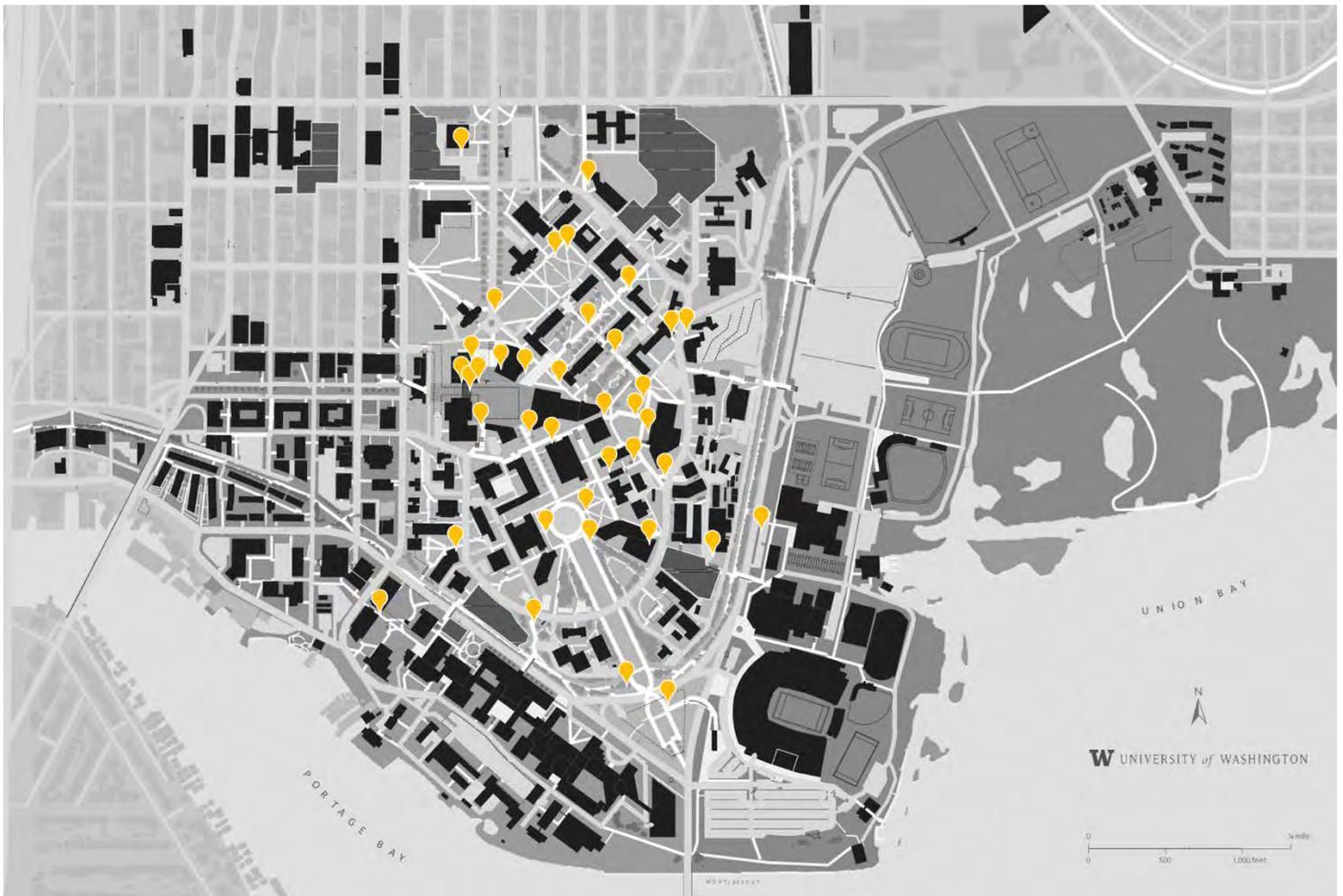
| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Food   | Compostable      | 178            | 200            | 47%          |
| Compostable/Soiled Paper                     | Compostable      | 90             | 148            | 38%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 260            | 98             | 73%          |
| Rigid Containers                             | Mixed Recyclable | 4              | 23             | 17%          |
| PET Bottles & Containers                     | Mixed Recyclable | 15             | 16             | 49%          |
| Beverage Glass                               | Mixed Recyclable | 24             | 13             | 66%          |
| Compostable Single-use Food Service Plastics | Compostable      | 7              | 10             | 41%          |
| Container Glass                              | Mixed Recyclable | 0              | 3              | 1%           |
| HDPE Colored Bottles & Tubs                  | Mixed Recyclable | 1              | 3              | 21%          |
| HDPE Natural Bottles & Tubs                  | Mixed Recyclable | 6              | 3              | 67%          |
| <b>Recyclable</b>                            |                  | <b>323</b>     | <b>166</b>     | <b>66%</b>   |
| <b>Compostable</b>                           |                  | <b>281</b>     | <b>364</b>     | <b>44%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>604</b>     | <b>530</b>     | <b>53%</b>   |

\*This assumes a negligible contamination rate for combined fiber

# Outdoor Litter Receptacles: Bigbelly Stations

This section presents the findings for material generated from Bigbelly Stations, which are outdoor receptacles located throughout campus. Each Bigbelly Station contains three containers located next to each other: one bin for garbage, one for recycling, and one for compost. The map below shows all locations of Bigbelly Stations on campus.

Figure 97. Garbage, Recycling, and Compost Collection Locations: Bigbelly Stations



Campus users disposed of 46 tons of material through Bigbelly Stations annually and achieved a 52 percent recovery rate. Figure 94 shows the tonnages and percentages by weight for garbage, compost, and recycling in Bigbelly Stations.

No comparisons for disposal of garbage through Bigbelly Stations for the current and 2003 study can be made. Bigbelly Stations were not on campus until 2012. Garbage disposal from all outdoor litter receptacles (all container types) decreased by 80 percent since the 2003 study, from 223 to 44 tons.



Figure 98. Annual Tons by Stream: Bigbelly Stations

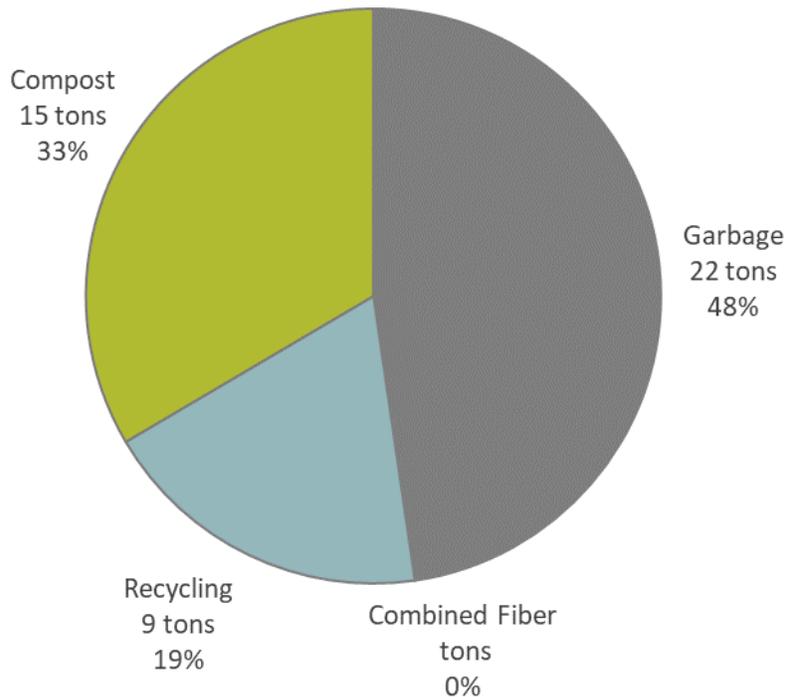


Figure 99 shows the percentage of material in the garbage that is recoverable and the percentage of material in the recycling and compost that is contamination. Nearly three-quarters (71%) of material in the garbage is recoverable. Over one-third (38%) of material in recycling is contamination, which is greater than the overall campus contamination rate of 26 percent. Approximately 8 percent of material in compost is contamination, which is comparable to the overall campus contamination rate of 8 percent. Bigbelly Stations had the second highest rate of contamination in the recycling among all generator groups included in this study.

Figure 99. Recoverability and Contamination by Stream: Bigbelly Stations

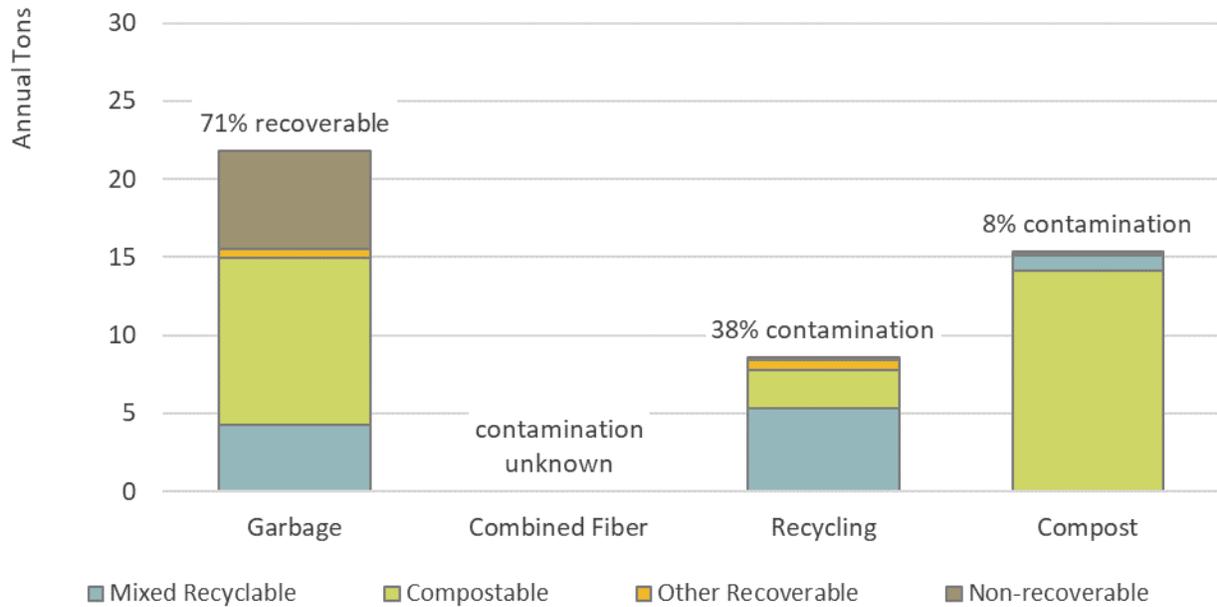


Figure 100 presents the composition and quantity of material in Bigbelly Stations across all streams by material class. The data include all material disposed in the garbage, recycling, and compost streams. The largest material classes generated by Bigbelly Stations are organics (37%), paper (30%), and plastics (21%). Bigbelly Stations are the only generator group that had the organics material class as the largest component of its disposed material by weight. For all other generator groups, the top material class was paper.

Figure 100. Annual Tons by Material Class, All Streams: Bigbelly Stations

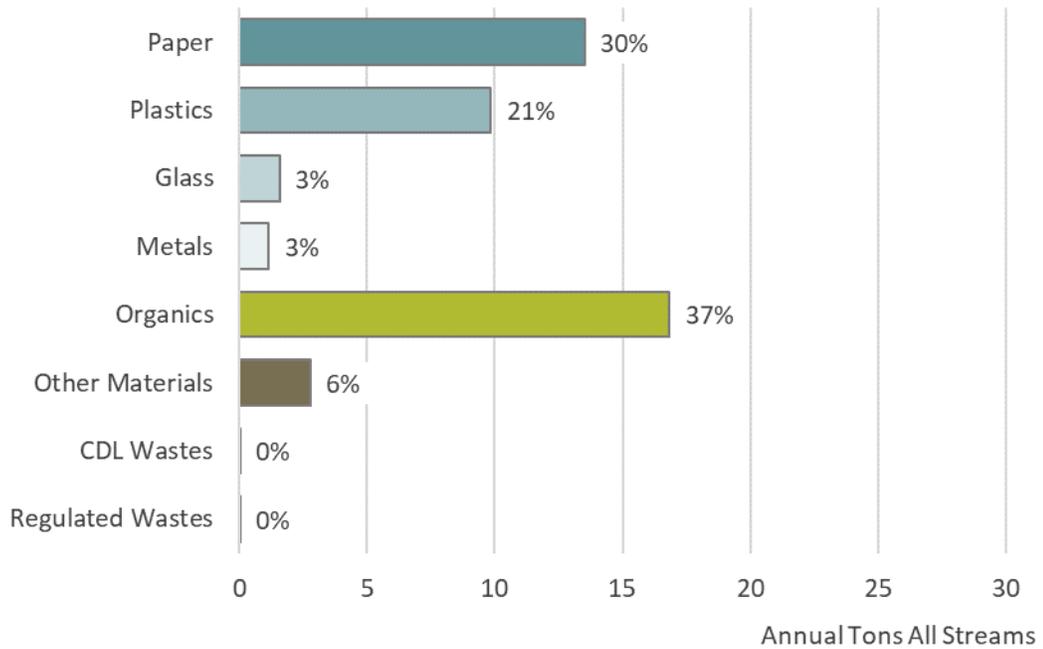
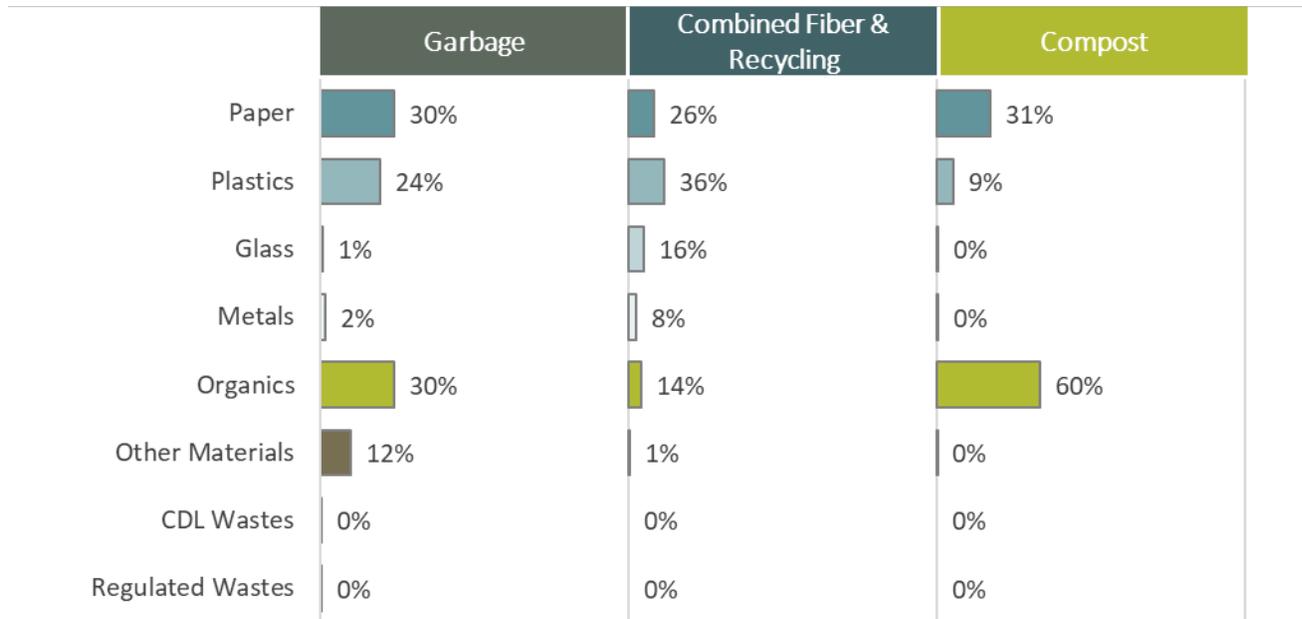


Figure 101 breaks down material composition further by displaying percent composition by material class for each stream.

- ▶ Organics (30%), paper (30%), and plastics (24%) are the largest material classes in garbage, together representing around 84 percent of the stream.
- ▶ Plastics (36%) and paper (26%) are the largest material classes in combined fiber and recycling streams.
- ▶ Organics (60%) is the largest material class in compost.

Figure 101. Annual Tons by Material Class and Stream: Bigbelly Stations



Bars report annual tons and percentages report class composition for each stream.

Table 59 lists the top ten material types in Bigbelly Stations across all streams by weight. The most prevalent material types are *food* (36%) and *compostable/soiled paper* (18%), both of which are compostable.

Table 59. Top Ten Material Types by Weight, All Streams: Bigbelly Stations

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons |
|---|------------------|--------------|-----------|
| Food  | Compostable      | 36%          | 17        |
| Compostable/Soiled Paper                      | Compostable      | 18%          | 8         |
| Other Film                                    | Non-recoverable  | 6%           | 3         |
| Compostable Single-use Food Service Plastics  | Compostable      | 4%           | 2         |
| Animal Waste                                  | Non-recoverable  | 4%           | 2         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 4%           | 2         |
| PET Bottles & Containers                      | Mixed Recyclable | 3%           | 2         |
| Mixed Low-grade Paper                         | Mixed Recyclable | 3%           | 2         |
| Beverage Glass                                | Mixed Recyclable | 3%           | 2         |
| Rigid Containers                              | Mixed Recyclable | 3%           | 2         |
| Top Ten Total                                 |                  | 85%          | 39        |
| Remaining Recoverable                         |                  | 10%          | 4         |
| Remaining Non-recoverable                     |                  | 5%           | 2         |
| <b>Generation Annual Tons</b>                 |                  | <b>100%</b>  | <b>46</b> |

## COMPOSITION RESULTS: BIGBELLY STATIONS GARBAGE

This section describes the composition and quantity of material found in garbage in Bigbelly Stations. As shown in Figure 102, nearly half (49%) of the material in the garbage is compostable and approximately one-fifth (20%) of the material is mixed recyclable.

Figure 102. Annual Tons by Recoverability Category: Bigbelly Stations Garbage

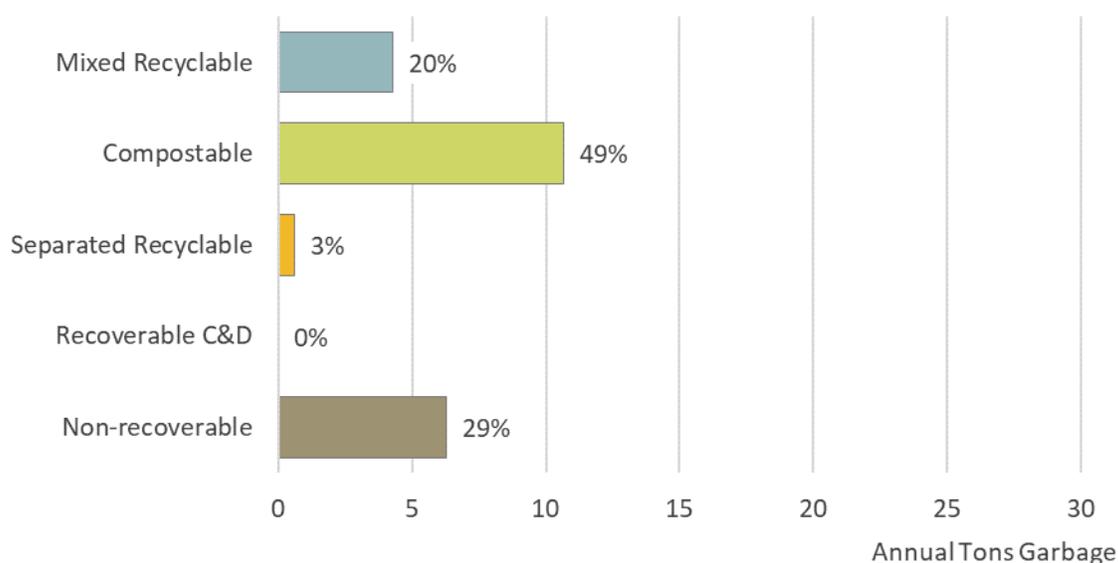


Table 60 shows the top ten material types by weight found in the garbage. Nearly one-third (29%) of material found in the garbage is *food*. The next most prevalent material types are *compostable/soiled paper* (16%) and *other film* (11%).

Table 60. Top Ten Material Types by Weight: Bigbelly Stations Garbage

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons |
|---|------------------|--------------|-----------|
| Food  | Compostable      | 29%          | 6         |
| Compostable/Soiled Paper                      | Compostable      | 16%          | 3         |
| Other Film                                    | Non-recoverable  | 11%          | 3         |
| Animal Waste                                  | Non-recoverable  | 8%           | 2         |
| Rigid Containers                              | Mixed Recyclable | 4%           | 1         |
| Mixed Low-grade Paper                         | Mixed Recyclable | 4%           | 1         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 4%           | 1         |
| Compostable Single-use Food Service Plastics  | Compostable      | 3%           | 1         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable | 3%           | 1         |
| Non-recoverable & Composite Paper             | Non-recoverable  | 2%           | 0         |
| <b>Top Ten Total</b>                          |                  | <b>85%</b>   | <b>19</b> |
| Remaining Recoverable                         |                  | 8%           | 2         |
| Remaining Non-recoverable                     |                  | 7%           | 2         |
| <b>Garbage Annual Tons</b>                    |                  | <b>100%</b>  | <b>22</b> |

## COMPOSITION RESULTS: BIGBELLY STATIONS RECYCLING

This section describes the composition and quantity of recycling from Bigbelly Stations by recoverability category and contaminant type. As shown in Figure 103, over three-fifths (62%) of material in recycling is mixed recyclable. Approximately 28 percent is compostable material, which is a contaminant in the recycling stream.

Figure 103. Annual Tons by Recoverability Category: Bigbelly Stations Recycling

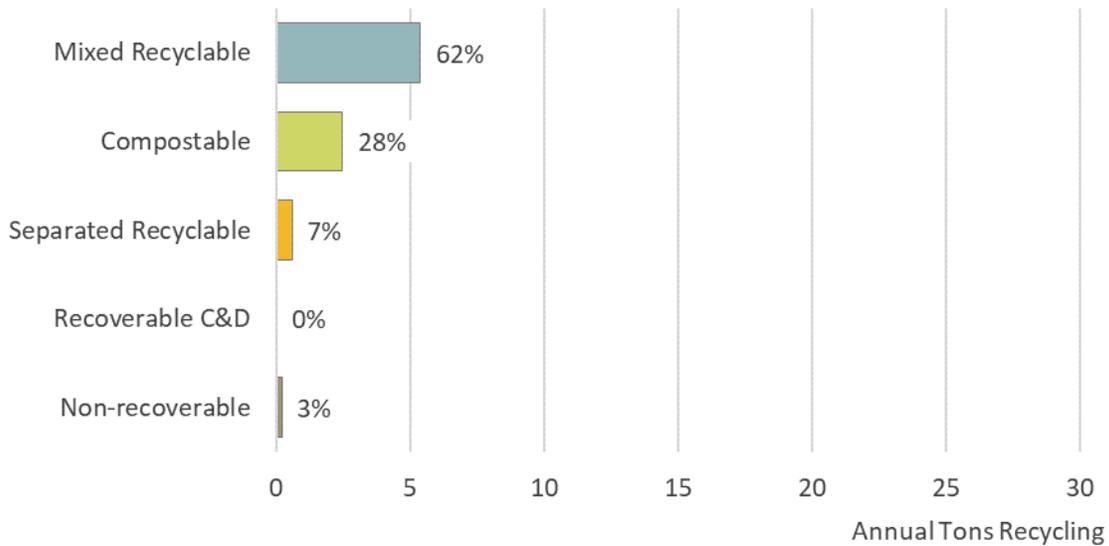


Table 61 lists the ten most prevalent contaminants by weight in the recycling. The most prevalent contaminants are *food* (14%), *compostable/soiled paper* (9%), and *loose clean shopping/dry cleaner bags* (6%).

Table 61. Top Ten Contaminants by Weight: Bigbelly Stations Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons |
|--|----------------------|--------------|-----------|
| Food   | Compostable          | 14%          | 1         |
| Compostable/Soiled Paper                     | Compostable          | 9%           | 1         |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable | 6%           | 1         |
| Compostable Single-use Food Service Plastics | Compostable          | 5%           | 0         |
| Other Film                                   | Non-recoverable      | 1%           | 0         |
| Non-recoverable & Composite Paper            | Non-recoverable      | 1%           | 0         |
| Non-recoverable Rigid Packaging              | Non-recoverable      | 0.5%         | 0         |
| Textiles                                     | Separated Recyclable | 0.4%         | 0         |
| Non-recoverable & Composite Plastic          | Non-recoverable      | 0.2%         | 0         |
| Other Electronics                            | Separated Recyclable | 0.2%         | 0         |
| Top Ten Total                                |                      | 37%          | 3         |
| Remaining Recoverable                        |                      | 1%           | 0         |
| Remaining Non-recoverable                    |                      | 62%          | 5         |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>9</b>  |

## COMPOSITION RESULTS: BIGBELLY STATIONS COMPOST

This section shows the material composition and quantity generated by Big Belly bins compost. As shown in Figure 104, 92 percent of material in the compost stream is compostable, while the remainder is mixed recyclable (7%) and non-recoverable (1%).

Figure 104. Annual Tons by Recoverability Category: Bigbelly Stations Compost

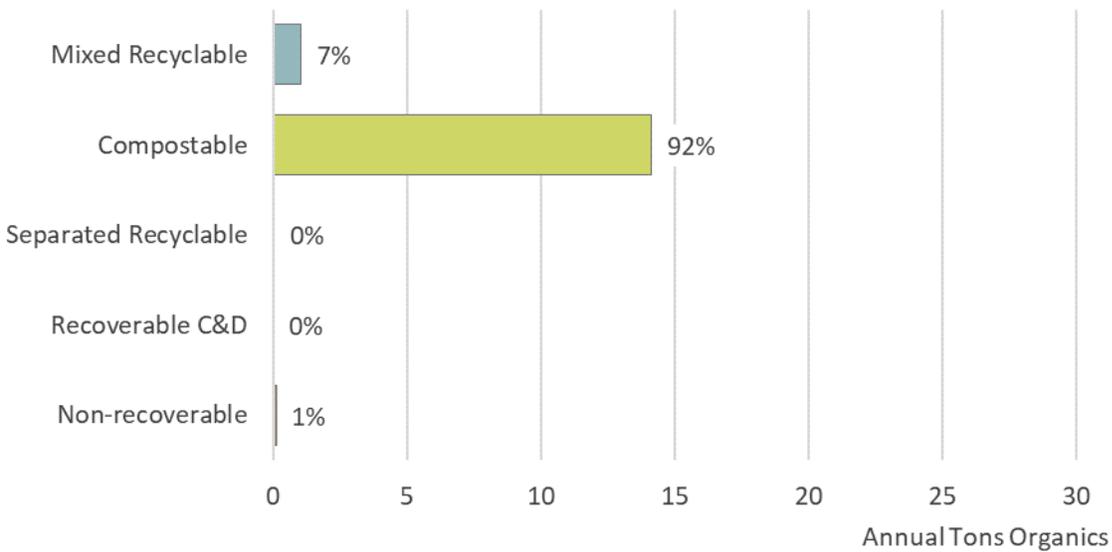


Table 62 lists the most prevalent contaminants in Big Belly bins compost stream by weight. The most prevalent contaminant is *non-compostable single-use food service paper* (3%).

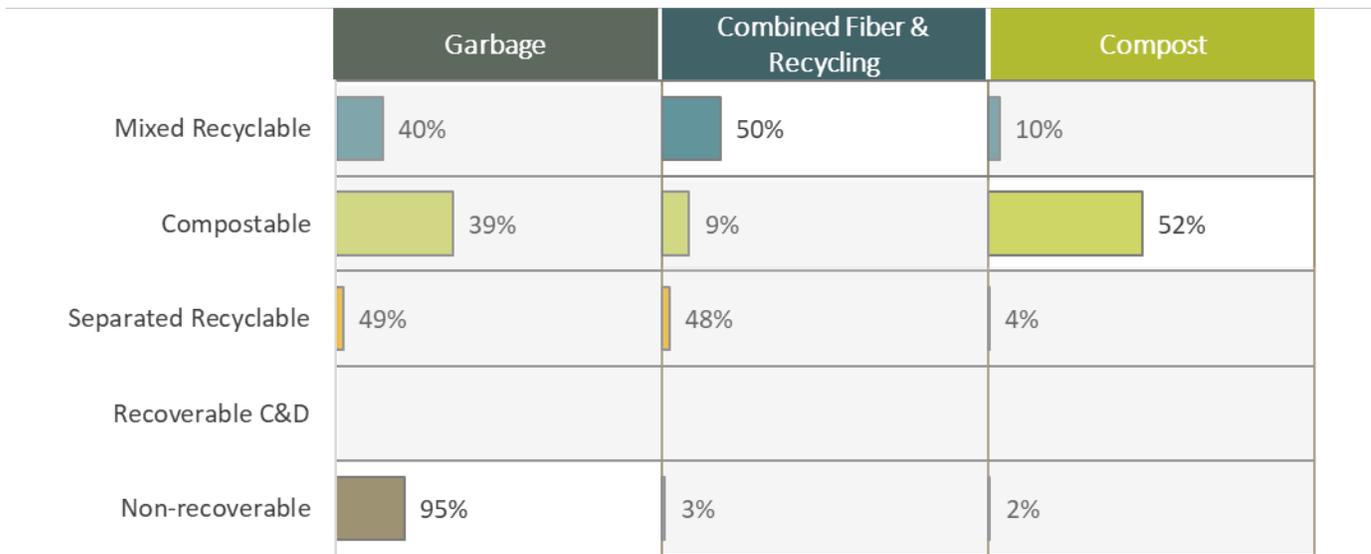
Table 62. Top Ten Contaminants by Weight: Bigbelly Stations Compost

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons |
|---|------------------|--------------|-----------|
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 3%           | 0         |
| Rigid Containers                              | Mixed Recyclable | 1%           | 0         |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable | 1%           | 0         |
| Mixed Low-grade Paper                         | Mixed Recyclable | 1%           | 0         |
| PET Bottles & Containers                      | Mixed Recyclable | 0.4%         | 0         |
| Other Film                                    | Non-recoverable  | 0.4%         | 0         |
| High-grade Paper                              | Mixed Recyclable | 0.2%         | 0         |
| Non-recoverable & Composite Paper             | Non-recoverable  | 0.2%         | 0         |
| Non-recoverable Rigid Packaging               | Non-recoverable  | 0.2%         | 0         |
| Aluminum Cans                                 | Mixed Recyclable | 0.1%         | 0         |
| <b>Top Ten Total</b>                          |                  | <b>7%</b>    | <b>1</b>  |
| Remaining Recoverable                         |                  | 1%           | 0         |
| Remaining Non-recoverable                     |                  | 92%          | 14        |
| <b>Compost Annual Tons</b>                    |                  | <b>100%</b>  | <b>15</b> |

## OPPORTUNITIES

This section describes opportunities to increase recovery of material through recycling or compost streams. As shown in Figure 105, 40 percent of mixed recyclable material generated by Bigbelly Stations is going in the garbage, and 10 percent is going in the compost as contamination, presenting opportunities to recover this material through recycling instead. Likewise, nearly two-fifths (39%) of compostable material is going in the garbage and 9 percent in the recycling, presenting opportunities to recover this material through increased composting.

Figure 105. Recoverability and Actual Disposal: Bigbelly Stations



Bars report annual tons and percentages report capture of material by each stream.

Table 63 shows the top recoverable materials generated by Bigbelly Stations, listed in order from most to least recoverable tons remaining. Overall, *food, compostable/soiled paper, and recyclable paper & combined fiber* have the most tons remaining for recovery.

Table 63. Top Recoverable Material Types: Bigbelly Stations

| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Food   | Compostable      | 9              | 8              | 55%          |
| Compostable/Soiled Paper                     | Compostable      | 4              | 4              | 48%          |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 1              | 3              | 29%          |
| Compostable Single-use Food Service Plastics | Compostable      | 1              | 1              | 42%          |
| Rigid Containers                             | Mixed Recyclable | 0              | 1              | 26%          |
| PET Bottles & Containers                     | Mixed Recyclable | 1              | 0              | 83%          |
| Beverage Glass                               | Mixed Recyclable | 1              | 0              | 87%          |
| Aluminum Cans                                | Mixed Recyclable | 1              | 0              | 86%          |
| Other Single-use Aluminum                    | Mixed Recyclable | 0              | 0              | 26%          |
| Other Untreated wood                         | Compostable      | 0              | 0              | 22%          |
| <b>Recyclable</b>                            |                  | <b>5</b>       | <b>5</b>       | <b>50%</b>   |
| <b>Compostable</b>                           |                  | <b>14</b>      | <b>13</b>      | <b>52%</b>   |
| <b>Total Recoverable</b>                     |                  | <b>19</b>      | <b>18</b>      | <b>51%</b>   |

\*This assumes a negligible contamination rate for combined fiber



# Outdoor Litter Receptacles: Smart Cans

This section describes the quantities and composition of garbage and recycling disposed in outdoor Smart Cans throughout campus. A Smart Can consists of a receptacle for recycling that is located above a garbage bin. Smart Cans do not include an area for collecting compost. An image of this type of can is shown at right.



The map below shows all the location of all outdoor litter receptacles on campus that are Smart Cans.

Figure 106. Garbage and Recycling Collection Locations: Smart Cans



Smart Cans generated a total of 23 tons, of which 1 ton (4%) was collected for recycling. Figure 107 shows the composition of disposed Smart Can material by stream.

Garbage disposal from all outdoor litter receptacles (all container types) decreased by 80 percent since the 2003 study, from 223 to 44 tons. Note that though Smart Cans were in use in 2003, Bigbelly Stations were not.

Figure 107. Annual Tons by Stream: Smart Cans

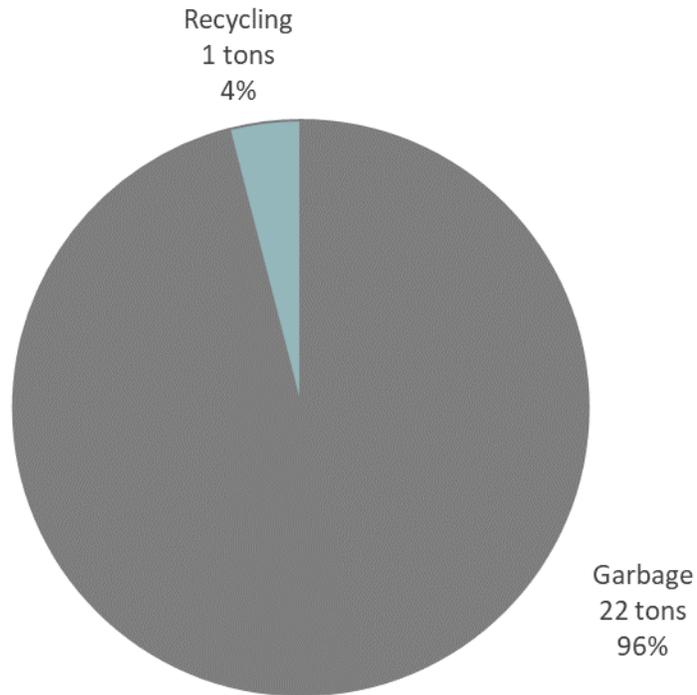


Figure 108 shows the quantity and percentage of material in garbage that is recoverable, along with the quantity and percentage of contaminant material in recycling. Nearly two-thirds (63%) of material in the garbage is recoverable, and over one-tenth (15%) of material found in the recycling is a contaminant.

Figure 108. Recoverability and Contamination by Stream: Smart Cans

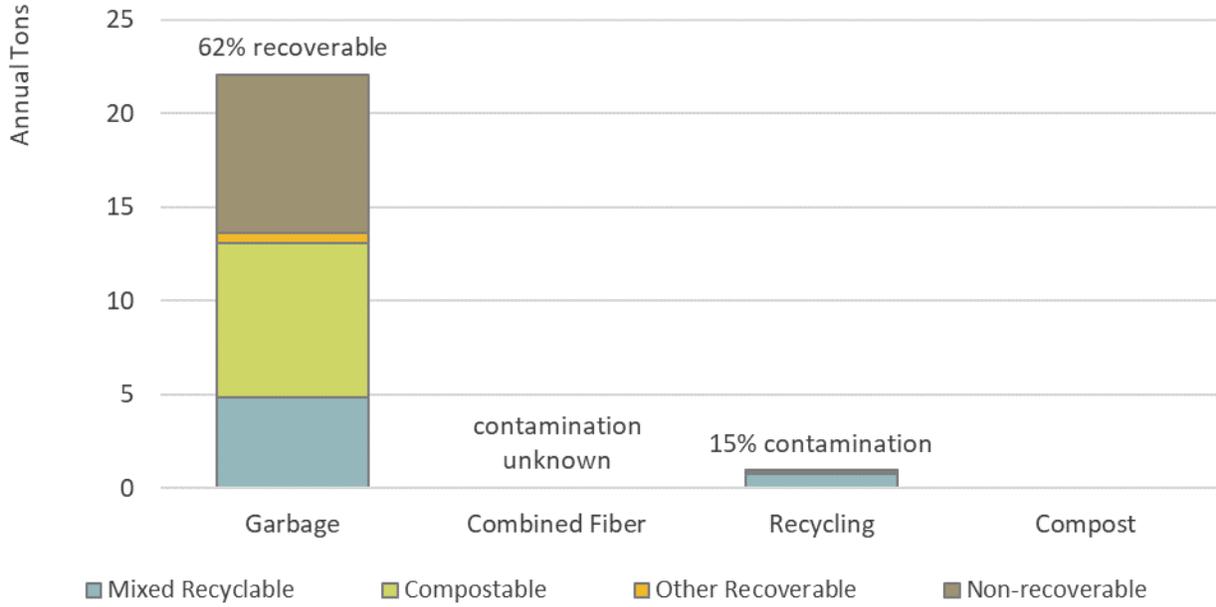


Figure 109 presents the tonnages and corresponding percentages of material from both garbage and recycling from Smart Cans by material class. Material generated by Smart Cans are primarily paper (28%), other materials (24%), and organics (23%). A larger portion of disposed material in Smart Cans is other materials than for any other generator group included in the study.

Figure 109. Annual Tons by Material Class, All Streams: Smart Cans

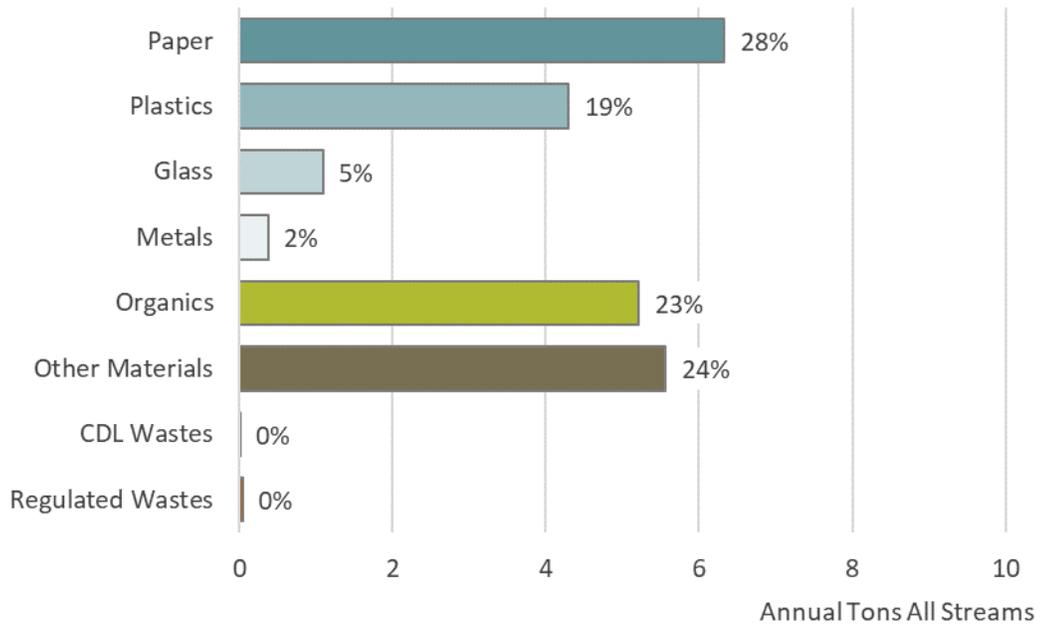
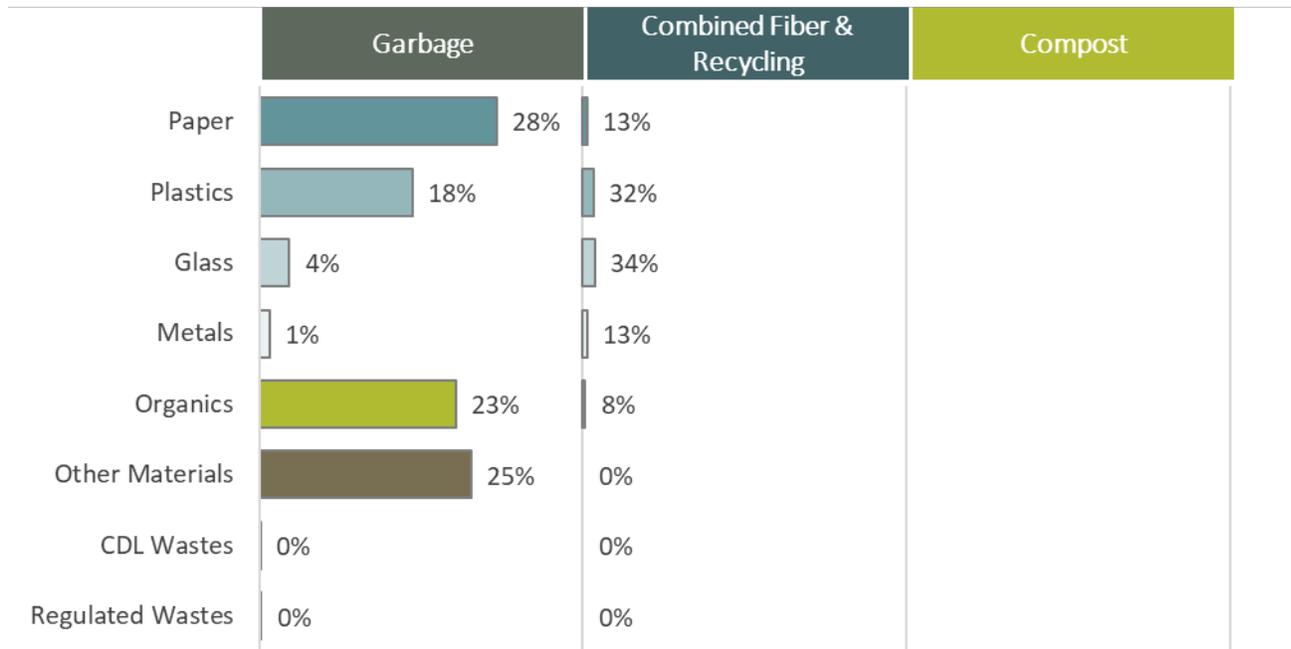


Figure 110 shows the relative tonnages of each material class by stream and the percent composition of each stream by material class. As shown:

- ▶ Paper (28%), other materials (25%), organics (23%), and plastics (18%) are the most prevalent material classes in garbage. Together, they represent approximately 94 percent of the stream.
- ▶ The most prevalent materials in the combined fiber and recycling streams are glass (34%) and plastics (32%).
- ▶ No data are shown for compost since Smart Cans do not have a compartment to collect compost.

Figure 110. Annual Tons by Material Class and Stream: Smart Cans



Bars report annual tons and percentages report class composition for each stream.

Table 64 lists the top ten material types by weight in Smart Cans. The most prevalent materials are *animal waste* (22%), *food* (21%), and *compostable/soiled paper* (13%). Together, they make up over one-half (56%) of material found in Smart Cans.

Table 64. Top Ten Material Types by Weight, All Streams: Smart Cans

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons |
|---|------------------|--------------|-----------|
| Animal Waste                                  | Non-recoverable  | 22%          | 5         |
| Food  | Compostable      | 21%          | 5         |
| Compostable/Soiled Paper                      | Compostable      | 13%          | 3         |
| Other Film                                    | Non-recoverable  | 9%           | 2         |
| Mixed Low-grade Paper                         | Mixed Recyclable | 4%           | 1         |
| Beverage Glass                                | Mixed Recyclable | 4%           | 1         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 4%           | 1         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable | 3%           | 1         |
| Rigid Containers                              | Mixed Recyclable | 2%           | 1         |
| PET Bottles & Containers                      | Mixed Recyclable | 2%           | 1         |
| Top Ten Total                                 |                  | 85%          | 19        |
| Remaining Recoverable                         |                  | 9%           | 2         |
| Remaining Non-recoverable                     |                  | 6%           | 1         |
| <b>Generation Annual Tons</b>                 |                  | <b>100%</b>  | <b>23</b> |

## COMPOSITION RESULTS: SMART CANS GARBAGE

This section presents the compositions and quantities of material found in garbage in Smart Cans. Figure 111 presents the composition of garbage from Smart Cans by recoverability category. Over one-third (37%) of material in Smart Cans is recoverable through compost, and almost one-quarter (22%) of material is a mixed recyclable material.

Figure 111. Annual Tons by Recoverability Category: Smart Cans Garbage

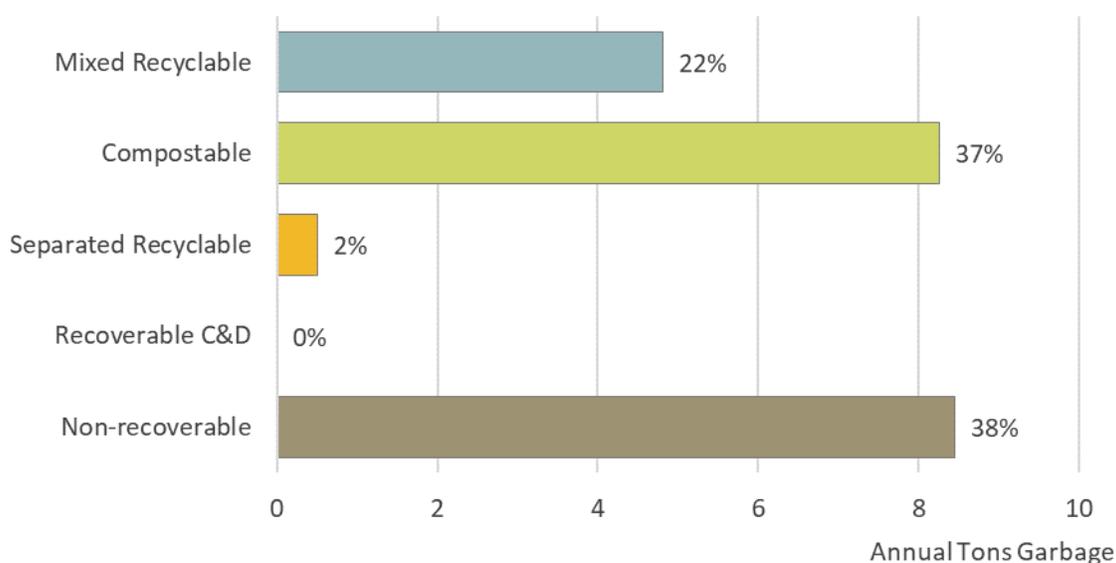


Table 65 shows the top material types found in Smart Can garbage by weight. The most prevalent materials are *animal waste* (23%), *food* (22%), and *compostable/soiled paper* (13%).

Table 65. Top Ten Material Types by Weight: Smart Cans Garbage

| Material Type                                 | Recoverability   | Est. Percent | Est. Tons |
|---|------------------|--------------|-----------|
| Animal Waste                                  | Non-recoverable  | 23%          | 5         |
| Food  | Compostable      | 22%          | 5         |
| Compostable/Soiled Paper                      | Compostable      | 13%          | 3         |
| Other Film                                    | Non-recoverable  | 9%           | 2         |
| Mixed Low-grade Paper                         | Mixed Recyclable | 5%           | 1         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable | 4%           | 1         |
| Beverage Glass                                | Mixed Recyclable | 3%           | 1         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable | 3%           | 1         |
| Rigid Containers                              | Mixed Recyclable | 2%           | 1         |
| Compostable Single-use Food Service Plastics  | Compostable      | 2%           | 0         |
| <b>Top Ten Total</b>                          |                  | <b>85%</b>   | <b>19</b> |
| Remaining Recoverable                         |                  | 8%           | 2         |
| Remaining Non-recoverable                     |                  | 7%           | 1         |
| <b>Garbage Annual Tons</b>                    |                  | <b>100%</b>  | <b>22</b> |

## COMPOSITION RESULTS: SMART CANS RECYCLING

This section details the composition of material from recycling in Smart Cans. As shown in Figure 112, over four-fifths (85%) of material is mixed recyclable, and over one-tenth (13%) is compostable.

Figure 112. Annual Tons by Recoverability Category: Smart Cans Recycling

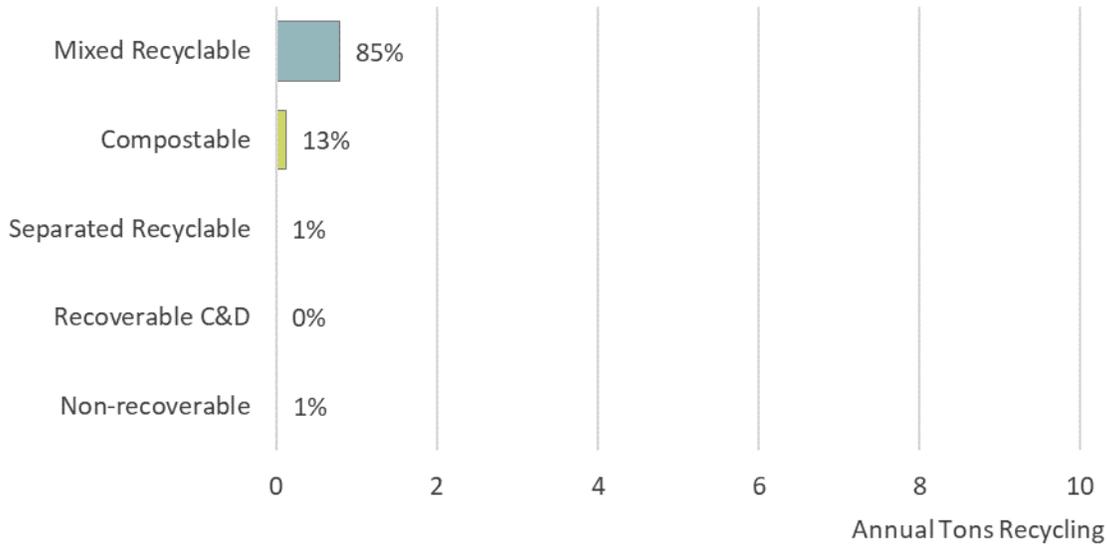


Table 66 lists the top ten contaminants found in Smart Cans recycling by weight. The most prevalent contaminants are *food* (7%), *compostable/soiled paper* (4%), and *compostable single-use food service plastics* (2%), all of which are compostable materials.

Table 66. Top Ten Contaminants by Weight: Smart Cans Recycling

| Material Type                                | Recoverability       | Est. Percent | Est. Tons |
|--|----------------------|--------------|-----------|
| Food   | Compostable          | 7%           | 0         |
| Compostable/Soiled Paper                     | Compostable          | 4%           | 0         |
| Compostable Single-use Food Service Plastics | Compostable          | 2%           | 0         |
| Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable | 1%           | 0         |
| Non-recoverable Rigid Packaging              | Non-recoverable      | 0.5%         | 0         |
| Non-recoverable & Composite Organics         | Non-recoverable      | 0.4%         | 0         |
| Compostable Bags                             | Compostable          | 0.2%         | 0         |
| Non-recoverable & Composite Paper            | Non-recoverable      | 0.2%         | 0         |
| Other Film                                   | Non-recoverable      | 0.1%         | 0         |
| Non-recoverable & Composite Plastic          | Non-recoverable      | 0.1%         | 0         |
| <b>Top Ten Total</b>                         |                      | <b>14%</b>   | <b>0</b>  |
| Remaining Recoverable                        |                      | 0.2%         | 0         |
| Remaining Non-recoverable                    |                      | 85%          | 1         |
| <b>Recycling Annual Tons</b>                 |                      | <b>100%</b>  | <b>1</b>  |

## OPPORTUNITIES

This section describes opportunities to recover material from Smart Cans. Figure 113 shows the capture rates of material in Smart Cans by recoverability category and stream. Smart Cans collect only garbage and recycling, so no data are shown for compost. As shown in the figure, 86 percent of combined fiber and mixed recyclable material is going in the garbage, while only 14 percent is going in the recycling. This presents an opportunity to recover combined fiber and mixed recyclable material by diverting them to the recycling stream. In garbage from Smart Cans, compostable materials are among the top materials by weight by recoverability category. However, the outdoor litter receptacle areas using Smart Cans do not have any compost collection to capture this material.

Figure 113. Recoverability and Actual Disposal: Smart Cans



Bars report annual tons and percentages report capture of material by each stream.

Table 67 shows the materials found in Smart Cans that can be captured for recovery. Because there is no compost container alongside Smart Cans, capture rates for all compostable material are zero percent. *Food* has the most remaining tons for recovery (5 tons), followed by *recyclable paper & combined fiber* and *compostable/soiled paper*, each with 3 tons available to capture for recovery. Even with a collocated recycling receptacle, the capture rates for recyclable materials such as *recyclable paper & combined fiber* and *PET bottles & containers* in the Smart Can generator group are lower than for the campus overall (capture rates for these materials overall are each 64%).

Table 67. Top Recoverable Material Types: Smart Cans

| Material Type                                | Recoverability   | Tons Recovered | Tons Remaining | Capture Rate |
|--|------------------|----------------|----------------|--------------|
| Food   | Compostable      | 0              | 5              | 0%           |
| Recyclable Paper & Combined Fiber*           | Mixed Recyclable | 0              | 3              | 3%           |
| Compostable/Soiled Paper                     | Compostable      | 0              | 3              | 0%           |
| Beverage Glass                               | Mixed Recyclable | 0              | 1              | 32%          |
| Rigid Containers                             | Mixed Recyclable | 0              | 1              | 8%           |
| Compostable Single-use Food Service Plastics | Compostable      | 0              | 0              | 0%           |
| PET Bottles & Containers                     | Mixed Recyclable | 0              | 0              | 41%          |
| Aluminum Cans                                | Mixed Recyclable | 0              | 0              | 44%          |
| Compostable Bags                             | Compostable      | 0              | 0              | 0%           |
| Other Ferrous                                | Mixed Recyclable | 0              | 0              | 0%           |
| <b>Recyclable</b>                            |                  | <b>1</b>       | <b>5</b>       | <b>14%</b>   |
| <b>Compostable</b>                           |                  | <b>0</b>       | <b>8</b>       | <b>0%</b>    |
| <b>Total Recoverable</b>                     |                  | <b>1</b>       | <b>13</b>      | <b>6%</b>    |

\*This assumes a negligible contamination rate for combined fiber



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# Appendix A. Material List and Definitions

Waste samples were sorted by hand into 88 individual material types, with the exception of wastes from the medical center and health sciences generator groups. A list of material types and definitions is below.

Following the definitions is a table showing the recoverability category of each material type (Table A-1). Next, Table A-2 compares the material list from the previous studies in 1989 and 2003 to the current one.

## Paper

1. **NEWSPAPER:** Printed newsprint (glossy paper advertisements were included in this material type if found mixed with newspaper; otherwise, they are included with mixed low-grade paper.).
2. **PLAIN OCC/KRAFT PAPER:** Old unwaxed/uncoated corrugated container boxes and Kraft paper, and brown paper bags.
3. **WAXED OCC/KRAFT PAPER:** Old waxed/coated corrugated container boxes and Kraft paper, and brown paper bags.
4. **HIGH-GRADE PAPER:** White and lightly colored bond, rag, or stationary grade paper. This includes white or lightly colored sulfite/sulfate bond, copy papers, notebook paper, envelopes, continuous-feed sulfite/sulfate computer printouts and forms of all types, excluding carbonless paper.
5. **MIXED LOW-GRADE PAPER:** Low-grade, potentially recyclable papers, including junk mail, magazines, colored papers, bleached Kraft, boxboard, mailing tubes, paperback books, phone books, receipt paper, and spiral notebooks.
6. **POLYCOATED/ASEPTIC PACKAGING:** Polycoated paperboard and aseptic packaging, including polycoated or aseptic milk, ice cream, juice containers, and frozen/refrigerator packaging.
7. **NON-COMPOSTABLE SINGLE-USE FOOD SERVICE PAPER:** Paper plates, bowls, and cups not labeled “compostable” and that appear to have a plastic lining or coating.
8. **COMPOSTABLE/SOILED PAPER:** Paper towels, paper plates, and waxed paper. Includes compostable paper food service ware, such as hot cups.
9. **HARDCOVER BOOKS:** Hardbound books such as textbooks.
10. **NON-RECOVERABLE & COMPOSITE PAPER:** Predominantly paper with other materials attached (e.g., orange juice cans (paper containers with metal attached) or laminated paper) and non-recyclable paper, such as bathroom or facial tissue paper and carbon copy paper.

## Plastic

11. **PET BOTTLES AND CONTAINERS:** Polyethylene terephthalate (#1) PET bottles, jars, and tubs.
12. **HDPE NATURAL BOTTLES AND TUBS:** High-density translucent polyethylene (#2) milk, juice, and beverage bottles, jars, and tubs.
13. **HDPE COLORED BOTTLES AND TUBS:** High-density colored polyethylene (#2) bottles, jars, and tubs. Examples include liquid detergent bottles and some hair care bottles. Excludes toxic product containers.
14. **COMPOSTABLE SINGLE-USE FOOD SERVICE PLASTICS:** Includes clamshells, cups, cup lids, and salad trays, if they are labeled “compostable.” Excludes clamshells, cups, plates, bowls, and other food service items made of Styrofoam.
15. **RIGID CONTAINERS:** All other #3-#7 packaging including rigid bottles, containers, and other packaging materials with codes #3-#7. Excludes toxic product containers and plastic-like containers labeled “Compostable” or “#7 PLA”.

16. *EXPANDED POLYSTYRENE*: Includes packaging and finished products made of expanded polystyrene without a labels/tape/adhesive, excludes food service polystyrene.
17. *NON-RECOVERABLE RIGID PACKAGING*: Rigid plastic packaging and of an unknown code (excluding expanded polystyrene), or non-recoverable #3-#7 plastic packaging types such as cookie tray inserts, pipette tip boxes, and packaging material such as lids or portion cups that are smaller than 3” in diameter.
18. *BAGGED CLEAN SHOPPING/DRY CLEANER BAGS*: Labeled grocery, merchandise, dry cleaner, and newspaper polyethylene film bags that were not contaminated with food, liquid or grit during use and are collected together in bags.
19. *LOOSE CLEAN SHOPPING/DRY CLEANER BAGS*: Loose labeled grocery, merchandise, dry cleaner, and newspaper polyethylene film bags that were not contaminated with food, liquid or grit during use.
20. *OTHER CLEAN POLYETHYLENE FILM*: Polyethylene film and bags, other than those identified above, which were not contaminated with food, liquid, or grit during use. Includes clean plastic sheeting, clean trash bags, polyethylene pallet wrap or stretch wrap, and mattress packaging.
21. *COMPOSTABLE BAGS*: Film bags made of materials such as corn starch or soy that are designed to compost (e.g. BioBag, EcoSafe) and compostable plastic (“PLA”).
22. *LATEX/NITRILE GLOVES*: Thin, disposable gloves typically used for food service and in laboratory and medical settings. These can be a variety of colors, including blue, purple, pink, or black.
23. *OTHER FILM*: Film packaging not defined above, or: was contaminated with food, liquid or grit during use; is woven together (e.g., grain bags); or that contains multiple layers of film or other materials that have been fused together (e.g., potato chip bags). This material type also includes contaminated plastic sheeting, photographic negatives, shower curtains, any bags used to contain liquid or food (e.g., produce), contaminated trash bags, used garbage bags, and shopping bags used as garbage bags.
24. *BED PANS/BASINS/TRAYS*: Pans and basins used primarily for containing liquids or human waste specimens. Trays used primarily for containing instruments or other items. (Usually made of HDPE or PP resins.)
25. *I.V. BAGS AND TUBING*: Intravenous bags (usually PVC) and both attached and unattached tubing (usually PVC). This includes residual components such as ports, stopcocks, and plastic clamps.
26. *RESPIRATORY HOSES*: Ribbed flexible air hoses used to deliver respiratory care to patients. This includes residual components such as mask-like devices, nasal prong tubing, and mask/bag devices.
27. *DRAPING/STERILE WRAP/GOWNS*: Disposable textiles used primarily for wraps, drapes, face masks, hair covers, and shoe covers. Wrap that encases sterilized objects. Usually a composite material made of plastic and wood or cotton fiber.
28. *OTHER PLASTIC PRODUCTS*: Finished plastic products such as toys, toothbrushes, vinyl hose, and Tyvek. Includes fiberglass resin products and materials.
29. *NON-RECOVERABLE & COMPOSITE PLASTIC*: Predominately plastic with other materials attached such as disposable razors, pens, lighters, blister packaging, and 3-ring binders. Includes expanded polystyrene that has labels/tape/adhesive and polystyrene food service ware.

## Glass

30. *BEVERAGE GLASS*: Includes pop, liquor, wine, juice, beer, vanilla extract, and vinegar bottles. Also includes reagent bottles from laboratories.
31. *CONTAINER GLASS*: All glass containers, all colors, holding solid materials such as mayonnaise, non-dairy creamer, and facial cream containers.
32. *LIGHT BULBS AND TUBES*: All spent lighting including incandescent, high lumen density (HLD), compact fluorescent, neon, fluorescent tubes, etc.

33. *LAB GLASS*: Test tubes, graduated cylinders, Erlenmeyer flasks, and other glass and plastic ware generated in a laboratory setting and liable to puncture a plastic bag. These materials are packaged in cardboard boxes labeled “LABORATORY GLASS.”
34. *NON-RECOVERABLE & COMPOSITE GLASS*: Window glass, mirrors, glassware, etc.

## Metal

35. *ALUMINUM CANS*: Aluminum beverage cans (UBC) and bi-metal cans made mostly of aluminum.
36. *OTHER ALUMINUM*: Aluminum food containers, trays, foil, products, and scrap such as window frames, cookware.
37. *OTHER NONFERROUS*: Metals not derived from iron, to which a magnet will not adhere, and which are not significantly contaminated with other metals or materials.
38. *TIN FOOD CANS*: Tinned steel food containers, including bi-metal cans mostly of steel.
39. *EMPTY AEROSOL CANS*: Empty, mixed material/metal aerosol cans. (Aerosols that still contain product are sorted according to that material—for instance, solvent-based paint.)
40. *OTHER FERROUS*: Ferrous and alloyed ferrous scrap metals to which a magnet adheres and which are not significantly contaminated with other metals or materials. Includes gas canisters if cut open.
41. *OIL FILTERS*: Metal oil filters used in cars and other automobiles.
42. *NON-RECOVERABLE & COMPOSITE METAL*: Motors, insulated wire, and finished products containing a mixture of metals, or metals and other materials, whose weight is derived significantly from the metal portion of its construction. White goods are banned from Seattle’s disposal. However, segments of large appliances are occasionally found; they are included in this material type.

## Organics

43. *PALLETS AND CRATES*: Wood pallets, crates, and other lumber packaging.
44. *LEAVES/GRASS/PRUNINGS*: Grass clippings, leaves, and weeds and prunings 6" or less in diameter, from bushes, shrubs, and trees.
45. *OTHER UNTREATED WOOD*: Compostable prunings or stumps 6" or greater in diameter and wooden food service ware.
46. *FOOD*: Food wastes, liquids, and scraps, including bone, rinds, etc. Excludes the weight of food containers, except when container weight is not appreciable compared to the food inside.
47. *NON-RECOVERABLE & COMPOSITE ORGANICS*: Wax, modeling clay, bar soap, cigarette butts, and other non-compostable organics not included above.

## CDL Wastes

48. *DIMENSION LUMBER*: Man made lumber products.
49. *CLEAN ENGINEERED WOOD*: Clean sheets of plywood, strandboard, particleboard, and other wood created using glue (only including trace amounts of paint, nails, and other contaminants).
50. *TREATED WOOD*: Lumber and wood products that have been painted or treated so as to render them difficult to compost.
51. *CONTAMINATED WOOD*: Lumber and wood products, often with adhering concrete or other contaminants that would not compost easily.
52. *NEW GYPSUM SCRAP*: New gypsum wallboard scrap.
53. *DEMO GYPSUM SCRAP*: Used or demolition gypsum wallboard scrap.
54. *FIBERGLASS INSULATION*: Fiberglass building and mechanical insulation, batt or rigid.

55. *ASPHALT/BRICKS/CONCRETE*: Portland cement mixtures (set or unset), fired-clay bricks, and asphalt paving. Includes concrete and asphalt with or without steel mesh and/or reinforcement bars, or "rebar."
56. *ROCK*: Rock gravel larger than 2" in diameter.
57. *ASPHALTIC ROOFING*: Asphalt shingles, tarpaper of built-up roofing.
58. *CARPET AND PADDING*: General category of flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material. Includes foam material used under carpet to provide insulation and padding. Most commonly made of urethane foam. Can be solid-colored or have a marbled appearance.
59. *CONSTRUCTION DEBRIS*: Construction debris (other than wood), which cannot be included into other component categories, and mixed fine building material scraps. Includes spray-in foam insulation.

## Regulated

60. *LATEX PAINTS*: Water-based paints and similar products.
61. *OIL-BASED PAINTS/SOLVENTS*: Solvent-based paints, varnishes, and similar products. Various solvents, including chlorinated and flammable solvents, paint strippers, solvents contaminated with other products such as paints, degreasers and some other cleaners if the primary ingredient is (or was) a solvent, or alcohol such as methanol and isopropanol.
62. *ADHESIVES/GLUES*: Water-based or oil/resin/volatile solvent-based glues and adhesives, including epoxy, rubber cement, two-part glues and sealers, and auto body fillers. Also includes water-based caulking compounds, grouts, and spackle
63. *CLEANERS*: Various acids and bases whose primary purpose is to clean surfaces, unclog drains, or perform other actions.
64. *PESTICIDES/HERBICIDES*: Variety of poisons whose purpose is to discourage or kill pests, weeds, or microorganisms. Fungicides and wood preservatives, such as pentachlorophenol, are also included.
65. *BATTERIES*: Dry-cell batteries of various sizes and types as commonly used in households and wet-cell batteries of various sizes and types as commonly used in automobiles.
66. *VEHICLE FLUIDS*: Gasoline, diesel fuel, and fuel oils and lubricating oils, primarily used in vehicles but including other types with similar characteristics.
67. *ASBESTOS*: Asbestos and asbestos-containing wastes (if this is the primary hazard associated with these wastes).
68. *EXPLOSIVES*: Gunpowder, unspent ammunition, picric acid and other potentially explosive chemicals.
69. *CLEAR & ORANGE BAG MEDICAL WASTE*: This includes clear and orange bags in medical waste samples. Please see the Department of Environmental Services website for more information about these wastes at <http://www.ehs.washington.edu/>.
70. *RED BAG MEDICAL WASTE*: This includes red bags found in medical waste samples. Please see the Department of Environmental Services website for more information about these wastes at <http://www.ehs.washington.edu/>. This category also includes potentially harmful wastes that do not fit into the above categories, including unidentifiable materials
71. *OTHER CHEMICAL WASTE*: Non-hazardous soaps, medicines, cosmetics, and other household chemicals.

## Other Materials

72. **TEXTILES:** Fabric materials including natural and synthetic textiles such as cotton, wool, silk, woven nylon, rayon, polyester, and other materials.
73. **MIXED TEXTILES:** Non-rag stock grade textiles such as upholstered items, non-leather shoes and handbags, heavy linens, and draperies.
74. **LEATHER:** Finished products or scraps of leather.
75. **DISPOSABLE DIAPERS:** Disposable baby diapers and adult protective undergarments.
76. **ANIMAL WASTE:** Animal carcasses and wastes, and kitty litter.
77. **RUBBER PRODUCTS:** Finished products and scrap materials made of rubber, such as bath mats, inner tubes, rubber hoses, rubber carpet padding, and foam rubber.
78. **TIRES:** Vehicle tires of all types.
79. **ASH:** Fireplace, burn barrel, or fire pit ash.
80. **FURNITURE:** Mixed-material furniture such as upholstered chairs.
81. **MATTRESSES:** Mattresses and box springs.
82. **SMALL APPLIANCES:** Small electric appliances such as miniature refrigerators, toasters, microwave ovens, power tools, curling irons, and light fixtures.
83. **CELL PHONES AND TABLETS:** Personal digital assistants (PDA) and cell phones. Tablets include video display devices, e-readers, and touch screen portable computers. This type includes products like the iPad, Kindle Fire, Nook, Surface, and Galaxy tab.
84. **CRT MONITORS/TELEVISIONS:** Computer monitors, televisions, and other items containing a cathode ray tube (CRT).
85. **NON-CRT MONITOR/TELEVISIONS:** Computer monitors and television sets that do not contain a cathode ray tube (CRT).
86. **OTHER ELECTRONICS:** Computer items such as laptops, processors, mice and mouse pads, keyboards, and disk drives and audio/visual equipment, including stereos, radios, tape decks, VCRs, etc.
87. **CERAMICS/PORCELAIN:** Finished ceramic or porcelain products such as dishware, toilets, pottery etc.
88. **FINES AND MISCELLANEOUS:** Vacuum cleaner bag contents, dryer sheets, soil, dirt, sand, and other materials not included elsewhere.

Table A-1 below lists the recoverability category assigned to each material type. Materials were categorized as *recyclable through the mixed recycling program, recyclable when separated, compostable, recoverable through construction and demolition (C&D) recycling efforts, or other, not recoverable.*

Items categorized as recyclable are generally collected through University of Washington programs and have viable Northwest markets. Electronic items banned from disposal in Washington State (e.g., computer and TV monitors) are also identified as recyclable in the separated recyclables recovery category. Items categorized as compostable are organic in nature and are suitable for composting in Seattle. Construction and demolition debris such as clean lumber and cement were identified as recoverable C&D. Those that do not meet these criteria were categorized as other, non-recoverable waste.

Materials are color-coded by recoverability category below as follows:

- ▶ Blue: mixed recyclable material
- ▶ Orange: source-separated recyclables with a dedicated collection service
- ▶ Green: compostable
- ▶ Brown: non-recoverable waste

Table A-1. Waste Sort Material Types by Recoverability Category

| Material Class | Material Type                                   | Recoverability Category |
|----------------|---|-------------------------|
| Paper          | 1 Newspaper                                     | Mixed Recyclable        |
|                | 2 Plain OCC/Kraft Paper                         | Mixed Recyclable        |
|                | 3 Waxed OCC/Kraft Paper                         | Compostable             |
|                | 4 High-grade Paper                              | Mixed Recyclable        |
|                | 5 Mixed Low-grade Paper                         | Mixed Recyclable        |
|                | 6 Polycoated/Aseptic Packaging                  | Mixed Recyclable        |
|                | 7 Non-compostable Single-use Food Service Paper | Non-recoverable         |
|                | 8 Compostable/Soiled Paper                      | Compostable             |
|                | 9 Hardcover Books                               | Separated Recyclable    |
|                | 10 Non-recoverable & Composite Paper            | Non-recoverable         |
| Plastics       | 11 PET Bottles and Containers                   | Mixed Recyclable        |
|                | 12 HDPE Natural Bottles and Tubs                | Mixed Recyclable        |
|                | 13 HDPE Colored Bottles and Tubs                | Mixed Recyclable        |
|                | 14 Compostable Single-use Food Service Plastics | Compostable             |
|                | 15 Rigid Containers                             | Mixed Recyclable        |
|                | 16 Expanded Polystyrene                         | Separated Recyclable    |
|                | 17 Non-recoverable Rigid Packaging              | Non-recoverable         |
|                | 18 Bagged Clean Shopping/Dry Cleaner Bags       | Mixed Recyclable        |
|                | 19 Loose Clean Shopping/Dry Cleaner Bags        | Separated Recyclable    |
|                | 20 Other Clean Polyethylene Film                | Separated Recyclable    |
|                | 21 Compostable Bags                             | Compostable             |
|                | 22 Latex/Nitrile Gloves                         | Non-recoverable         |
|                | 23 Other Film                                   | Non-recoverable         |
|                | 24 Bed Pans/Basins/Trays                        | Non-recoverable         |
|                | 25 I.V. Bags and Tubing                         | Non-recoverable         |
|                | 26 Respiratory Hoses                            | Non-recoverable         |
|                | 27 Draping/Sterile Wrap/Gowns                   | Non-recoverable         |
|                | 28 Plastic Products                             | Non-recoverable         |
|                | 29 Non-recoverable & Composite Plastic          | Non-recoverable         |
| Glass          | 30 Beverage Glass                               | Mixed Recyclable        |
|                | 31 Container Glass                              | Mixed Recyclable        |
|                | 32 Light Bulbs and Tubes                        | Separated Recyclable    |
|                | 33 Lab Glass                                    | Non-recoverable         |
|                | 34 Non-recoverable & Composite Glass            | Non-recoverable         |
| Metals         | 35 Aluminum Cans                                | Mixed Recyclable        |
|                | 36 Other Aluminum                               | Mixed Recyclable        |
|                | 37 Other Nonferrous                             | Mixed Recyclable        |
|                | 38 Tin Food Cans                                | Mixed Recyclable        |
|                | 39 Empty Aerosol Cans                           | Non-recoverable         |

| Material Class   | Material Type                           | Recoverability Category |
|------------------|---|-------------------------|
|                  | 40 Other Ferrous                        | Mixed Recyclable        |
|                  | 41 Oil Filters                          | Separated Recyclable    |
|                  | 42 Non-recoverable & Composite Metal    | Non-recoverable         |
| Organics         | 43 Pallets and Crates                   | Recoverable C&D         |
|                  | 44 Other Untreated wood                 | Compostable             |
|                  | 45 Leaves/Grass/Prunings                | Compostable             |
|                  | 46 Food                                 | Compostable             |
|                  | 47 Non-recoverable & Composite Organics | Non-recoverable         |
| CDL Wastes       | 48 Dimension Lumber                     | Recoverable C&D         |
|                  | 49 Clean Engineered Wood                | Non-recoverable         |
|                  | 50 Treated Wood                         | Non-recoverable         |
|                  | 51 Contaminated wood                    | Non-recoverable         |
|                  | 52 New Gypsum Scrap                     | Recoverable C&D         |
|                  | 53 Demo Gypsum Scrap                    | Non-recoverable         |
|                  | 54 Fiberglass Insulation                | Non-recoverable         |
|                  | 55 Asphalt/Bricks/Concrete              | Recoverable C&D         |
|                  | 56 Rock                                 | Non-recoverable         |
|                  | 57 Asphaltic Roofing                    | Recoverable C&D         |
|                  | 58 Carpet and Padding                   | Non-recoverable         |
| Regulated Wastes | 59 Construction Debris                  | Non-recoverable         |
|                  | 60 Latex Paints                         | Non-recoverable         |
|                  | 61 Adhesives/Glues                      | Non-recoverable         |
|                  | 62 Oil-Based Paints/Solvents            | Non-recoverable         |
|                  | 63 Cleaners                             | Non-recoverable         |
|                  | 64 Pesticides/Herbicides                | Non-recoverable         |
|                  | 65 Batteries                            | Separated Recyclable    |
|                  | 66 Vehicle Fluids                       | Non-recoverable         |
|                  | 67 Asbestos                             | Non-recoverable         |
|                  | 68 Explosives                           | Non-recoverable         |
|                  | 69 Clear & Orange Bag Medical Waste     | Non-recoverable         |
| Other Materials  | 70 Red Bag Medical Waste                | Non-recoverable         |
|                  | 71 Other Chemical Waste                 | Non-recoverable         |
|                  | 72 Textiles                             | Separated Recyclable    |
|                  | 73 Mixed Textiles                       | Separated Recyclable    |
|                  | 74 Leather                              | Non-recoverable         |
|                  | 75 Disposable Diapers                   | Non-recoverable         |
|                  | 76 Animal By-products                   | Non-recoverable         |
|                  | 77 Rubber Products                      | Non-recoverable         |
|                  | 78 Tires                                | Separated Recyclable    |
|                  | 79 Ash                                  | Non-recoverable         |

| Material Class | Material Type               | Recoverability Category |
|----------------|-----------------------------|-------------------------|
|                | 80 Furniture                | Non-recoverable         |
|                | 81 Mattresses               | Separated Recyclable    |
|                | 82 Small Appliances         | Separated Recyclable    |
|                | 83 Cell Phones and Tablets  | Separated Recyclable    |
|                | 84 CRT Monitors/Televisions | Separated Recyclable    |
|                | 85 Non-CRT Monitors         | Separated Recyclable    |
|                | 86 Other Electronics        | Separated Recyclable    |
|                | 87 Ceramics/Porcelain       | Non-recoverable         |
|                | 88 Fines and Miscellaneous  | Non-recoverable         |

Table A-2 compares the material lists used in previous campus waste characterization studies (1989 and 2003) to the material list used in the current study. Light blue in the table below indicates that the material type did not change between the studies. For example, *newspaper* has been a material type in each of the three characterization studies.

Table A-2. Comparison of Waste Sort Material Types: 1989, 2003, and 2018 Studies

| 1989                 | 2003                                   | 2018  |
|----------------------|--|---|
| <b>PAPER</b>         |  |   |
| Newspaper            | -                                      | -   |
| Corrugated Paper     | OCC/Kraft, Unwaxed                     | Plain OCC/Kraft Paper                         |
| Office Paper         | -                                      | High-grade Paper                              |
| Computer Paper       | -                                      |   |
| Mixed Scrap Paper    | Mixed Low Grade                        | Mixed Low-grade Paper                         |
|                      | Phone Books                            |   |
| Other Paper          | Milk/Juice Polycoats                   | Polycoated/Aseptic Packaging                  |
|                      | Frozen Food Polycoats                  |   |
|                      | Compostable/Soiled                     | Non-compostable Single-use Food Service Paper |
|                      | OCC/Kraft, Waxed                       | Compostable/Soiled Paper                      |
|                      | Other Paper                            | Waxed OCC/Kraft Paper                         |
|                      |  | Hardcover books                               |
|                      |  | Non-recoverable & Composite Paper             |
| <b>PLASTIC</b>       |  |   |
| PET Bottles          | PET Pop & Liquor                       | PET Bottles & Containers                      |
|                      | Other PET Bottles                      |   |
| HDPE Bottles         | HDPE Milk & Juice                      | HDPE Natural Bottles & Tubs                   |
|                      | Other HDPE Bottles                     | HDPE Colored Bottles & Tubs                   |
| Expanded Polystyrene | -                                      | -   |
| Plastic Packaging    | Other Plastic Bottles                  | Rigid Containers                              |
|                      | Jars & Tubs                            |   |
|                      | Other Rigid Packaging                  | Compostable Single-use Food Service Plastics  |
|                      |  | Non-recoverable Rigid Packaging               |
| Grocery/Bread Bags   | Bagged Clean Shopping/Dry Cleaner Bags |   |

| 1989                     | 2003   | 2018   |                       |
|--------------------------|--|--|-----------------------|
| Other Plastic Products   |  | Loose Clean Shopping/Dry Cleaner Bags          |                       |
|                          |  | Other Clean Polyethylene Film                  |                       |
|                          | Other Film   | Compostable Bags                               |                       |
|                          |  | Latex/Nitrile Gloves                           |                       |
|                          | Garbage Bags   | Other Film (includes all other film from 2003) |                       |
|                          | Plastic Products   |  | Bed Pans/Basins/Trays |
|                          |  |  | I.V. Bags and Tubing  |
|                          |  | Respiratory Hoses                              |                       |
|                          |  | Draping/Sterile Wrap/Gowns                     |                       |
|                          | Other Plastic Products                                   | Other Plastic Products                         |                       |
|                          | Plastic/Other Materials                                  | Non-recoverable & Composite Plastic            |                       |
| <b>GLASS</b>             |  |  |                       |
| Nonrefillable Pop        | Clear Beverage   | Beverage Glass                                 |                       |
| Refillable Pop           | Green Beverage   |  |                       |
| Nonrefillable Beer       | Brown Beverage   |  |                       |
| Refillable Beer          | <i>Characterized according to color</i>                  |  |                       |
| Container Glass          | -  | -  |                       |
| Nonrecyclable Glass      | Fluorescent Tubes  | Light Bulbs and Tubes                          |                       |
|                          | Lab Glass  | -  |                       |
|                          | Other Glass  | Non-recoverable & Composite Glass              |                       |
| <b>METAL</b>             |  |  |                       |
| Aluminum Cans            | -  | -  |                       |
| Aluminum Foil/Containers | -  | <i>Combined with Other Aluminum.</i>           |                       |
| Tinned Cans              | -  | Tin Food Cans                                  |                       |
| Bi-metal Cans            | <i>Characterized according to predominant metal</i>      |  |                       |
| Other Ferrous            | -  |  |                       |
| Nonferrous               | Other Nonferrous   | -  |                       |
|                          | Other Aluminum   | -  |                       |
|                          | Empty Aerosol Cans                                       | -  |                       |
| Mixed Metals/Materials   | -  | Non-recoverable & Composite Metal              |                       |
|                          | Metal Oil Filters  | -  |                       |
| White Goods              | <i>Moved to "Non-recoverable &amp; Composite Metals"</i> |  |                       |
| <b>RUBBER</b>            |  |  |                       |
| Rubber Products          | <i>Moved to "Other Materials"</i>                        | -  |                       |
| Tires                    | <i>Moved to "Other Materials"</i>                        | -  |                       |
| <b>ORGANICS</b>          |  |  |                       |
| Wood                     | Dimension Lumber; <i>new class CDL Wastes</i>            | -  |                       |
|                          | Treated Wood; <i>new class CDL Wastes</i>                | Clean Engineered Wood                          |                       |
|                          |  | Other Treated Wood                             |                       |
|                          | Contaminated Wood; <i>new class CDL Wastes</i>           | -  |                       |

| 1989  | 2003  | 2018   |
|---|---|--|
|   | Other Untreated Wood; <i>new class CDL Wastes</i> | <i>Moved to "Organics"</i>                                       |
|   | Pallets   | Pallets and Crates   |
|   | Crates/Boxes                                      |  |
| Leaves and Grass  | -   | Leaves/Grass/Prunings  |
| Prunings  | -   |  |
| Food  | -   | -  |
| <b>REGULATED</b>  |   |  |
| Latex Paints  | -   | -  |
| Adhesives/Glues   | Dangerous Glue/Adhesives                          | Adhesives/Glues  |
|   | Other Glue/Adhesives                              |  |
| Oil-based Paints/Solvents   | -   | -  |
| Cleaners  | -   | -  |
| Pesticides/Herbicides   | -   | -  |
| Batteries   | Dry-Cell Batteries                                | Batteries  |
|   | Wet-Cell Batteries                                |  |
| Gasoline/Kerosene   | -   | Vehicle Fluids   |
| Motor Oil/Diesel Oil  | -   |  |
| Asbestos  | -   | -  |
| Explosives  | -   | -  |
| Other Chemicals   | Clear & Orange Bag Medical                        | Clear & Orange Bag Medical                                       |
|   | Red Bag Medical                                   | Red Bag Medical  |
|   | Other Chemicals                                   | Other Chemicals  |
| <b>OTHER MATERIALS</b>  |   |  |
| Textiles  | Textiles/Clothing                                 | -  |
|   | Carpet/Upholstery                                 | <i>Mixed Textiles (carpet and padding moved to "CDL Wastes")</i> |
| Leather   | -   | -  |
| Disposable Diapers  | -   | -  |
| <i>Discarded from samples</i>   | Animal By-products                                | Animal Waste   |
| Ash   | -   | -  |
| <i>Split among various materials; Mixed Metal, Textiles, Other Plastics, etc.</i> | Furniture   | -  |
| <i>Split among various materials; Mixed Metal, Textiles, Other Plastics, etc.</i> | Mattresses  | -  |
|   | Small Appliances                                  | -  |
|   | A/V Equipment                                     | Other Electronics  |
|   | Other Computer Equipment                          |  |
|   | <i>(In Other Computer Equipment)</i>              | Cell Phones & Tablets  |
|   | Television Sets                                   | CRT Monitors/Televisions   |
| Computer Monitors   | Non-CRT Monitors/Televisions                      |  |
| Ceramics, Porcelain, China  | -   | -  |
| Gypsum Drywall  | New Gypsum Scrap; <i>new class CDL Wastes</i>     | -  |
|   | Demo Gypsum Scrap; <i>new class CDL Wastes</i>    | -  |
| Fiberglass Insulation   | <i>Moved to new class CDL Wastes</i>              | -  |
| Rock/Concrete/Brick   | <i>Moved to new class CDL Wastes</i>              | Asphalt/Bricks/Concrete  |

| 1989   | 2003  | 2018   |
|--|---|--|
|  |   | Rock   |
| Other Construction Debris  | <i>Moved to new class CDL Wastes</i>                | -  |
|  | <i>Asphaltic Roofing; new class CDL Wastes</i>      | -  |
| Sand, Dirt, Non-distinct Fines   | <i>Sand/Soil/Dirt moved to new class CDL Wastes</i> | Fines and Miscellaneous  |
|  | <i>Non-distinct Fines</i>                           |  |
| <i>Mostly in "Sand, Dirt, Non-distinct Fines; also in various "Mixed" and "Other" categories</i> | Misc. Organics                                      | <i>Renamed Non-compostable &amp; Composite Organics, moved under the class Organics.</i> |
| <i>Mostly in "Sand, Dirt, Non-distinct Fines; also in various "Mixed" and "Other" categories</i> | Misc. Inorganics                                    | <i>Included in Fines and Miscellaneous type</i>  |
| <i>Previously assigned its own class ("Rubber")</i>  | Rubber Products                                     | -  |
|  | Tires   | -  |

# Appendix B. Detailed Composition Results

Table B-1. Detailed Composition: Campus-wide

| Material Class / Material Type                | Recoverability Category | Garbage      |       |              | Recycling    |       |            | Compost      |       |            | Total        |       |              |
|---|-------------------------|--------------|-------|--------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|--------------|
|   |                         | Est. Percent | + / - | Est. Tons    | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons    |
| <b>Paper</b>                                  |                         | <b>43.5%</b> |       | <b>1,680</b> | <b>53.0%</b> |       | <b>522</b> | <b>38.9%</b> |       | <b>539</b> | <b>44.0%</b> |       | <b>2,741</b> |
| Newspaper                                     | Mixed Recyclable        | 0.5%         | 0.3%  | 20           | 2.8%         | 0.9%  | 27         | 0.1%         | 0.0%  | 1          | 0.8%         | 0.2%  | 48           |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 2.2%         | 0.4%  | 83           | 22.7%        | 4.5%  | 224        | 0.2%         | 0.1%  | 3          | 5.0%         | 0.8%  | 310          |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | 1            | 0.2%         | 0.1%  | 2          | 0.2%         | 0.1%  | 3          | 0.1%         | 0.0%  | 6            |
| High-grade Paper                              | Mixed Recyclable        | 1.5%         | 0.5%  | 58           | 5.4%         | 1.1%  | 53         | 0.1%         | 0.0%  | 2          | 1.8%         | 0.4%  | 112          |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 13.0%        | 1.2%  | 503          | 11.2%        | 1.8%  | 111        | 1.1%         | 0.2%  | 15         | 10.1%        | 0.8%  | 628          |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 0.7%         | 0.1%  | 26           | 0.9%         | 0.2%  | 9          | 1.0%         | 0.2%  | 14         | 0.8%         | 0.1%  | 50           |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.3%         | 0.0%  | 11           | 2.1%         | 0.5%  | 21         | 0.2%         | 0.1%  | 3          | 0.5%         | 0.1%  | 34           |
| Compostable/Soiled Paper                      | Compostable             | 18.9%        | 1.1%  | 728          | 5.9%         | 0.9%  | 58         | 35.7%        | 3.8%  | 495        | 20.6%        | 1.1%  | 1,282        |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | 0            | 0.2%         | 0.2%  | 2          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 2            |
| Non-recoverable & Composite Paper             | Non-recoverable         | 6.5%         | 1.1%  | 250          | 1.5%         | 1.0%  | 15         | 0.2%         | 0.1%  | 3          | 4.3%         | 0.7%  | 268          |
| <b>Plastics</b>                               |                         | <b>22.9%</b> |       | <b>885</b>   | <b>23.5%</b> |       | <b>232</b> | <b>8.2%</b>  |       | <b>113</b> | <b>19.7%</b> |       | <b>1,230</b> |
| PET Bottles & Containers                      | Mixed Recyclable        | 1.1%         | 0.1%  | 41           | 8.0%         | 1.3%  | 79         | 0.3%         | 0.1%  | 4          | 2.0%         | 0.2%  | 124          |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.2%         | 0.0%  | 8            | 2.2%         | 0.5%  | 22         | 0.0%         | 0.0%  | 1          | 0.5%         | 0.1%  | 31           |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.2%         | 0.1%  | 9            | 0.9%         | 0.3%  | 8          | 0.0%         | 0.0%  | 0          | 0.3%         | 0.1%  | 18           |
| Compostable Single-use Food Service Plastics  | Compostable             | 0.8%         | 0.1%  | 31           | 1.3%         | 0.3%  | 13         | 3.0%         | 0.5%  | 42         | 1.4%         | 0.1%  | 86           |
| Rigid Containers                              | Mixed Recyclable        | 1.6%         | 0.1%  | 61           | 2.7%         | 0.4%  | 26         | 0.6%         | 0.1%  | 8          | 1.5%         | 0.1%  | 95           |
| Expanded Polystyrene                          | Separated Recyclable    | 0.3%         | 0.1%  | 10           | 0.1%         | 0.1%  | 1          | 0.0%         | 0.0%  | 0          | 0.2%         | 0.0%  | 12           |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 1.4%         | 0.2%  | 53           | 0.3%         | 0.1%  | 3          | 0.2%         | 0.0%  | 2          | 0.9%         | 0.1%  | 58           |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | 0            | 0.2%         | 0.2%  | 2          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 3            |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.2%         | 0.0%  | 6            | 2.1%         | 0.4%  | 21         | 0.1%         | 0.1%  | 2          | 0.5%         | 0.1%  | 29           |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 1.2%         | 0.2%  | 47           | 0.9%         | 0.3%  | 9          | 0.2%         | 0.1%  | 3          | 0.9%         | 0.1%  | 59           |
| Compostable Bags                              | Compostable             | 0.1%         | 0.0%  | 5            | 0.1%         | 0.1%  | 1          | 3.1%         | 0.5%  | 42         | 0.8%         | 0.1%  | 48           |
| Latex/Nitrile Gloves                          | Non-recoverable         | 1.6%         | 0.2%  | 61           | 0.4%         | 0.2%  | 4          | 0.2%         | 0.1%  | 2          | 1.1%         | 0.1%  | 67           |
| Other Film                                    | Non-recoverable         | 8.1%         | 0.5%  | 311          | 2.3%         | 0.4%  | 23         | 0.3%         | 0.0%  | 4          | 5.4%         | 0.3%  | 338          |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.2%         | 0.1%  | 9            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 9            |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.6%         | 0.1%  | 22           | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.4%         | 0.1%  | 22           |
| Respiratory Hoses                             | Non-recoverable         | 0.4%         | 0.1%  | 16           | 0.2%         | 0.2%  | 2          | 0.0%         | 0.0%  | -          | 0.3%         | 0.1%  | 18           |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 1.3%         | 0.2%  | 51           | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.8%         | 0.1%  | 51           |
| Other Plastic Products                        | Non-recoverable         | 1.6%         | 0.3%  | 64           | 1.4%         | 0.6%  | 14         | 0.0%         | 0.0%  | 1          | 1.3%         | 0.2%  | 79           |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 2.1%         | 0.7%  | 82           | 0.4%         | 0.1%  | 4          | 0.1%         | 0.0%  | 1          | 1.4%         | 0.4%  | 86           |
| <b>Glass</b>                                  |                         | <b>3.2%</b>  |       | <b>122</b>   | <b>9.8%</b>  |       | <b>97</b>  | <b>0.1%</b>  |       | <b>1</b>   | <b>3.5%</b>  |       | <b>220</b>   |
| Beverage Glass                                | Mixed Recyclable        | 0.7%         | 0.1%  | 27           | 9.0%         | 1.6%  | 89         | 0.1%         | 0.0%  | 1          | 1.9%         | 0.3%  | 117          |
| Container Glass                               | Mixed Recyclable        | 0.1%         | 0.0%  | 5            | 0.4%         | 0.2%  | 4          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.0%  | 9            |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Lab Glass                                     | Non-recoverable         | 2.2%         | 1.2%  | 84           | 0.2%         | 0.2%  | 2          | 0.0%         | 0.0%  | -          | 1.4%         | 0.7%  | 86           |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.1%         | 0.1%  | 6            | 0.2%         | 0.2%  | 2          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 8            |
| <b>Metals</b>                                 |                         | <b>1.7%</b>  |       | <b>66</b>    | <b>5.5%</b>  |       | <b>55</b>  | <b>0.2%</b>  |       | <b>3</b>   | <b>2.0%</b>  |       | <b>124</b>   |
| Aluminum Cans                                 | Mixed Recyclable        | 0.3%         | 0.0%  | 11           | 2.7%         | 0.4%  | 26         | 0.1%         | 0.0%  | 1          | 0.6%         | 0.1%  | 38           |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.2%         | 0.0%  | 8            | 0.2%         | 0.1%  | 2          | 0.1%         | 0.1%  | 2          | 0.2%         | 0.0%  | 11           |
| Other Nonferrous                              | Mixed Recyclable        | 0.1%         | 0.1%  | 3            | 0.3%         | 0.3%  | 3          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.1%  | 6            |
| Tin Food Cans                                 | Mixed Recyclable        | 0.1%         | 0.0%  | 5            | 1.9%         | 0.5%  | 19         | 0.0%         | 0.0%  | 0          | 0.4%         | 0.1%  | 23           |
| Empty Aerosol Cans                            | Non-recoverable         | 0.0%         | 0.0%  | 2            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 2            |
| Other Ferrous                                 | Mixed Recyclable        | 0.4%         | 0.2%  | 16           | 0.4%         | 0.5%  | 4          | 0.0%         | 0.0%  | 0          | 0.3%         | 0.2%  | 21           |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.6%         | 0.2%  | 21           | 0.1%         | 0.1%  | 1          | 0.0%         | 0.0%  | 0          | 0.4%         | 0.1%  | 22           |
| <b>Organics</b>                               |                         | <b>15.2%</b> |       | <b>586</b>   | <b>6.7%</b>  |       | <b>66</b>  | <b>50.5%</b> |       | <b>701</b> | <b>21.7%</b> |       | <b>1,353</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Leaves/Grass/Prunings                         | Compostable             | 0.6%         | 0.3%  | 23           | 0.0%         | 0.0%  | 0          | 2.3%         | 2.9%  | 32         | 0.9%         | 0.7%  | 55           |
| Other Untreated Wood                          | Compostable             | 0.1%         | 0.0%  | 3            | 0.0%         | 0.0%  | 0          | 0.2%         | 0.2%  | 3          | 0.1%         | 0.1%  | 7            |
| Food  | Compostable             | 14.2%        | 1.7%  | 547          | 6.7%         | 1.0%  | 66         | 47.8%        | 3.9%  | 663        | 20.5%        | 1.4%  | 1,275        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.4%         | 0.4%  | 14           | 0.0%         | 0.0%  | 0          | 0.2%         | 0.2%  | 2          | 0.3%         | 0.3%  | 16           |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

WASTE CHARACTERIZATION STUDY  
APPENDIX B. DETAILED COMPOSITION RESULTS

Table B-1. Detailed Composition: Campus-Wide (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |              | Recycling    |       |            | Compost      |       |              | Total        |       |              |
|----------------------------------|-----------------------------|--------------|-------|--------------|--------------|-------|------------|--------------|-------|--------------|--------------|-------|--------------|
|                                  |                             | Est. Percent | + / - | Est. Tons    | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons    | Est. Percent | + / - | Est. Tons    |
| <b>Other Materials</b>           |                             | <b>5.4%</b>  |       | <b>210</b>   | <b>1.0%</b>  |       | <b>10</b>  | <b>2.0%</b>  |       | <b>27</b>    | <b>4.0%</b>  |       | <b>247</b>   |
| Textiles                         | Separated Recyclable        | 1.4%         | 0.4%  | 55           | 0.2%         | 0.1%  | 2          | 0.1%         | 0.0%  | 2            | 0.9%         | 0.2%  | 58           |
| Mixed Textiles                   | Separated Recyclable        | 0.5%         | 0.2%  | 19           | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0            | 0.3%         | 0.1%  | 19           |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Disposable Diapers               | Non-recoverable             | 1.4%         | 0.7%  | 53           | 0.0%         | 0.0%  | 0          | 0.1%         | 0.0%  | 2            | 0.9%         | 0.4%  | 55           |
| Animal Waste                     | Non-recoverable             | 0.3%         | 0.1%  | 13           | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            | 0.2%         | 0.1%  | 14           |
| Rubber Products                  | Non-recoverable             | 0.4%         | 0.3%  | 17           | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -            | 0.3%         | 0.2%  | 17           |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | 2            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 2            |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -            |
| Furniture                        | Non-recoverable             | 0.1%         | 0.2%  | 6            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.1%         | 0.1%  | 6            |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -            |
| Small Appliances                 | Separated Recyclable        | 0.1%         | 0.1%  | 4            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.1%         | 0.1%  | 4            |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -            |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -            |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | 2            | 0.4%         | 0.5%  | 4          | 0.0%         | 0.0%  | -            | 0.1%         | 0.1%  | 5            |
| Ceramics/Porcelain               | Non-recoverable             | 0.1%         | 0.2%  | 6            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -            | 0.1%         | 0.1%  | 6            |
| Fines & Miscellaneous            | Non-recoverable             | 0.8%         | 0.2%  | 33           | 0.4%         | 0.2%  | 4          | 1.7%         | 2.5%  | 24           | 1.0%         | 0.6%  | 60           |
| <b>CDL Wastes</b>                |                             | <b>1.8%</b>  |       | <b>70</b>    | <b>0.2%</b>  |       | <b>2</b>   | <b>0.0%</b>  |       | <b>0</b>     | <b>1.2%</b>  |       | <b>73</b>    |
| Dimension Lumber                 | Recoverable C&D             | 0.1%         | 0.1%  | 4            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.1%         | 0.0%  | 4            |
| Clean Engineered Wood            | Non-recoverable             | 0.1%         | 0.0%  | 2            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | 3            |
| Treated Wood                     | Non-recoverable             | 0.1%         | 0.1%  | 3            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -            | 0.1%         | 0.1%  | 3            |
| Contaminated wood                | Non-recoverable             | 0.1%         | 0.1%  | 3            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.1%  | 3            |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.1%  | 2            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 2            |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | 2            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 2            |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.1%         | 0.1%  | 2            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 2            |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Carpet & Padding                 | Non-recoverable             | 0.8%         | 0.5%  | 31           | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.5%         | 0.3%  | 31           |
| Construction Debris              | Non-recoverable             | 0.5%         | 0.5%  | 20           | 0.2%         | 0.3%  | 2          | 0.0%         | 0.0%  | -            | 0.4%         | 0.3%  | 22           |
| <b>Regulated Wastes</b>          |                             | <b>6.3%</b>  |       | <b>243</b>   | <b>0.2%</b>  |       | <b>2</b>   | <b>0.1%</b>  |       | <b>1</b>     | <b>3.9%</b>  |       | <b>245</b>   |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | 0            |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -            |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 1            |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -            |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | 0            |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 1.1%         | 0.6%  | 41           | 0.0%         | 0.1%  | 0          | 0.1%         | 0.1%  | 1            | 0.7%         | 0.4%  | 42           |
| Red Bag Medical Waste            | Non-recoverable             | 4.8%         | 1.3%  | 184          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            | 3.0%         | 0.8%  | 184          |
| Other Chemical Waste             | Non-recoverable             | 0.4%         | 0.3%  | 16           | 0.1%         | 0.1%  | 1          | 0.0%         | 0.0%  | 0            | 0.3%         | 0.2%  | 17           |
|                                  | <b>Mixed Recyclable</b>     | <b>23%</b>   |       | <b>893</b>   | <b>74%</b>   |       | <b>729</b> | <b>4%</b>    |       | <b>56</b>    | <b>27%</b>   |       | <b>1,678</b> |
|                                  | <b>Compostable</b>          | <b>35%</b>   |       | <b>1,338</b> | <b>14%</b>   |       | <b>140</b> | <b>92%</b>   |       | <b>1,281</b> | <b>44%</b>   |       | <b>2,759</b> |
|                                  | <b>Separated Recyclable</b> | <b>4%</b>    |       | <b>145</b>   | <b>4%</b>    |       | <b>38</b>  | <b>1%</b>    |       | <b>7</b>     | <b>3%</b>    |       | <b>190</b>   |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>7</b>     | <b>0%</b>    |       | <b>0</b>   | <b>0%</b>    |       | <b>0</b>     | <b>0%</b>    |       | <b>7</b>     |
|                                  | <b>Non-recoverable</b>      | <b>38%</b>   |       | <b>1,477</b> | <b>8%</b>    |       | <b>78</b>  | <b>3%</b>    |       | <b>43</b>    | <b>26%</b>   |       | <b>1,599</b> |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>3,861</b> | <b>100%</b>  |       | <b>986</b> | <b>100%</b>  |       | <b>1,387</b> | <b>100%</b>  |       | <b>6,233</b> |
| <b>Sample Count</b>              |                             |              |       | <b>233</b>   |              |       | <b>122</b> |              |       | <b>120</b>   |              |       |              |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-2. Detailed Composition: Academic Buildings

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Compost      |       |            | Total        |       |            |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|------------|--------------|-------|------------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  |
| <b>Paper</b>                                  |                         | <b>35.5%</b> |       | <b>88</b> | <b>54.9%</b> |       | <b>93</b> | <b>42.1%</b> |       | <b>129</b> | <b>42.9%</b> |       | <b>310</b> |
| Newspaper                                     | Mixed Recyclable        | 1.2%         | 1.0%  | 3         | 1.8%         | 1.5%  | 3         | 0.1%         | 0.2%  | 0          | 0.9%         | 0.5%  | 6          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 1.7%         | 0.4%  | 4         | 18.1%        | 9.5%  | 30        | 0.1%         | 0.1%  | 0          | 4.9%         | 2.2%  | 35         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0          | 0.1%         | 0.1%  | 1          |
| High-grade Paper                              | Mixed Recyclable        | 1.4%         | 0.6%  | 4         | 10.9%        | 4.0%  | 18        | 0.2%         | 0.1%  | 1          | 3.1%         | 1.0%  | 23         |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 8.1%         | 1.4%  | 20        | 12.0%        | 3.0%  | 20        | 1.1%         | 0.4%  | 3          | 6.0%         | 0.9%  | 44         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 1.0%         | 0.2%  | 2         | 0.9%         | 0.2%  | 1         | 1.0%         | 0.5%  | 3          | 1.0%         | 0.2%  | 7          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.9%         | 0.3%  | 2         | 1.2%         | 0.9%  | 2         | 0.3%         | 0.3%  | 1          | 0.7%         | 0.3%  | 5          |
| Compostable/Soiled Paper                      | Compostable             | 19.5%        | 1.9%  | 48        | 7.8%         | 2.3%  | 13        | 39.1%        | 7.6%  | 120        | 25.1%        | 3.3%  | 182        |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | 0         | 0.9%         | 1.2%  | 1         | 0.0%         | 0.0%  | -          | 0.2%         | 0.3%  | 2          |
| Non-recoverable & Composite Paper             | Non-recoverable         | 1.6%         | 0.6%  | 4         | 1.3%         | 0.9%  | 2         | 0.1%         | 0.1%  | 0          | 0.9%         | 0.3%  | 7          |
| <b>Plastics</b>                               |                         | <b>25.3%</b> |       | <b>63</b> | <b>20.9%</b> |       | <b>35</b> | <b>10.8%</b> |       | <b>33</b>  | <b>18.2%</b> |       | <b>131</b> |
| PET Bottles & Containers                      | Mixed Recyclable        | 1.8%         | 0.2%  | 5         | 7.0%         | 2.1%  | 12        | 0.4%         | 0.1%  | 1          | 2.4%         | 0.5%  | 17         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.9%         | 0.4%  | 2         | 1.2%         | 0.9%  | 2         | 0.1%         | 0.0%  | 0          | 0.6%         | 0.2%  | 5          |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.3%         | 0.2%  | 0         | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1          |
| Compostable Single-use Food Service Plastics  | Compostable             | 2.7%         | 0.5%  | 7         | 2.9%         | 1.7%  | 5         | 3.9%         | 1.3%  | 12         | 3.3%         | 0.7%  | 24         |
| Rigid Containers                              | Mixed Recyclable        | 3.2%         | 0.5%  | 8         | 2.3%         | 0.8%  | 4         | 1.0%         | 0.5%  | 3          | 2.1%         | 0.3%  | 15         |
| Expanded Polystyrene                          | Separated Recyclable    | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0          | 0.1%         | 0.0%  | 1          |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 1.2%         | 0.2%  | 3         | 0.2%         | 0.1%  | 0         | 0.3%         | 0.2%  | 1          | 0.6%         | 0.1%  | 4          |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          | 0.0%         | 0.1%  | 0          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.2%         | 0.0%  | 1         | 5.0%         | 2.0%  | 8         | 0.2%         | 0.2%  | 1          | 1.3%         | 0.5%  | 10         |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 1.3%         | 0.4%  | 3         | 0.2%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0          | 0.5%         | 0.1%  | 4          |
| Compostable Bags                              | Compostable             | 0.1%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         | 4.1%         | 1.7%  | 13         | 1.8%         | 0.7%  | 13         |
| Latex/Nitrile Gloves                          | Non-recoverable         | 1.4%         | 0.5%  | 3         | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | 0          | 0.5%         | 0.2%  | 4          |
| Other Film                                    | Non-recoverable         | 10.5%        | 0.8%  | 26        | 1.1%         | 0.5%  | 2         | 0.4%         | 0.2%  | 1          | 4.0%         | 0.3%  | 29         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Other Plastic Products                        | Non-recoverable         | 0.8%         | 0.2%  | 2         | 0.2%         | 0.1%  | 0         | 0.0%         | 0.1%  | 0          | 0.4%         | 0.1%  | 3          |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.6%         | 0.6%  | 2         | 0.2%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0          | 0.3%         | 0.2%  | 2          |
| <b>Glass</b>                                  |                         | <b>3.1%</b>  |       | <b>8</b>  | <b>10.9%</b> |       | <b>18</b> | <b>0.1%</b>  |       | <b>0</b>   | <b>3.7%</b>  |       | <b>27</b>  |
| Beverage Glass                                | Mixed Recyclable        | 1.4%         | 0.4%  | 4         | 10.0%        | 3.7%  | 17        | 0.1%         | 0.1%  | 0          | 2.9%         | 0.9%  | 21         |
| Container Glass                               | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.1%         | 0.2%  | 0         | 0.0%         | 0.0%  | -          | 0.1%         | 0.0%  | 1          |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Lab Glass                                     | Non-recoverable         | 0.8%         | 0.8%  | 2         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.3%         | 0.3%  | 2          |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.7%         | 0.9%  | 2         | 0.7%         | 1.0%  | 1         | 0.0%         | 0.0%  | -          | 0.4%         | 0.4%  | 3          |
| <b>Metals</b>                                 |                         | <b>2.6%</b>  |       | <b>6</b>  | <b>3.9%</b>  |       | <b>7</b>  | <b>0.3%</b>  |       | <b>1</b>   | <b>1.9%</b>  |       | <b>14</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.4%         | 0.1%  | 1         | 3.1%         | 0.8%  | 5         | 0.1%         | 0.0%  | 0          | 0.9%         | 0.2%  | 6          |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.7%         | 0.4%  | 2         | 0.2%         | 0.1%  | 0         | 0.2%         | 0.2%  | 1          | 0.4%         | 0.2%  | 3          |
| Other Nonferrous                              | Mixed Recyclable        | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          |
| Tin Food Cans                                 | Mixed Recyclable        | 0.4%         | 0.3%  | 1         | 0.5%         | 0.2%  | 1         | 0.0%         | 0.0%  | 0          | 0.2%         | 0.1%  | 2          |
| Empty Aerosol Cans                            | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Other Ferrous                                 | Mixed Recyclable        | 0.3%         | 0.1%  | 1         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -          | 0.1%         | 0.0%  | 1          |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.8%         | 0.4%  | 2         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.3%         | 0.1%  | 2          |
| <b>Organics</b>                               |                         | <b>26.1%</b> |       | <b>65</b> | <b>8.7%</b>  |       | <b>15</b> | <b>46.2%</b> |       | <b>142</b> | <b>30.6%</b> |       | <b>221</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Leaves/Grass/Prunings                         | Compostable             | 0.8%         | 1.2%  | 2         | 0.0%         | 0.0%  | 0         | 8.5%         | 12.8% | 26         | 3.9%         | 5.4%  | 28         |
| Other Untreated Wood                          | Compostable             | 0.1%         | 0.0%  | 0         | 0.1%         | 0.0%  | 0         | 0.2%         | 0.1%  | 1          | 0.1%         | 0.1%  | 1          |
| Food  | Compostable             | 25.1%        | 3.6%  | 62        | 8.6%         | 3.5%  | 15        | 37.5%        | 6.6%  | 115        | 26.5%        | 3.2%  | 192        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          | 0.1%         | 0.1%  | 1          |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-2. Detailed Composition: Academic Buildings (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |            | Recycling    |       |            | Compost      |       |            | Total        |       |            |
|----------------------------------|-----------------------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|------------|
|                                  |                             | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  |
| <b>Other Materials</b>           |                             | <b>4.1%</b>  |       | <b>10</b>  | <b>0.7%</b>  |       | <b>1</b>   | <b>0.4%</b>  |       | <b>1</b>   | <b>1.7%</b>  |       | <b>13</b>  |
| Textiles                         | Separated Recyclable        | 0.9%         | 0.6%  | 2          | 0.1%         | 0.1%  | 0          | 0.1%         | 0.1%  | 0          | 0.4%         | 0.2%  | 3          |
| Mixed Textiles                   | Separated Recyclable        | 0.5%         | 0.3%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.2%         | 0.1%  | 1          |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Disposable Diapers               | Non-recoverable             | 1.0%         | 0.2%  | 2          | 0.0%         | 0.0%  | -          | 0.2%         | 0.1%  | 1          | 0.4%         | 0.1%  | 3          |
| Animal Waste                     | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Rubber Products                  | Non-recoverable             | 0.2%         | 0.3%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1          |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Small Appliances                 | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Other Electronics                | Separated Recyclable        | 0.1%         | 0.1%  | 0          | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Ceramics/Porcelain               | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.1%         | 0.2%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Fines & Miscellaneous            | Non-recoverable             | 1.4%         | 0.7%  | 3          | 0.4%         | 0.5%  | 1          | 0.1%         | 0.1%  | 0          | 0.6%         | 0.3%  | 4          |
| <b>CDL Wastes</b>                |                             | <b>2.2%</b>  |       | <b>5</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.0%</b>  |       | <b>0</b>   | <b>0.8%</b>  |       | <b>5</b>   |
| Dimension Lumber                 | Recoverable C&D             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.1%  | 0          | 0.0%         | 0.0%  | 0          |
| Treated Wood                     | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Carpet & Padding                 | Non-recoverable             | 0.7%         | 0.8%  | 2          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.2%         | 0.3%  | 2          |
| Construction Debris              | Non-recoverable             | 1.4%         | 2.0%  | 3          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.5%         | 0.7%  | 3          |
| <b>Regulated Wastes</b>          |                             | <b>1.0%</b>  |       | <b>3</b>   | <b>0.0%</b>  |       | <b>0</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.4%</b>  |       | <b>3</b>   |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Red Bag Medical Waste            | Non-recoverable             | 0.2%         | 0.3%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1          |
| Other Chemical Waste             | Non-recoverable             | 0.8%         | 0.5%  | 2          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.3%         | 0.2%  | 2          |
|                                  | <b>Mixed Recyclable</b>     | <b>24%</b>   |       | <b>59</b>  | <b>70%</b>   |       | <b>118</b> | <b>5%</b>    |       | <b>14</b>  | <b>26%</b>   |       | <b>191</b> |
|                                  | <b>Compostable</b>          | <b>48%</b>   |       | <b>120</b> | <b>20%</b>   |       | <b>33</b>  | <b>93%</b>   |       | <b>287</b> | <b>61%</b>   |       | <b>440</b> |
|                                  | <b>Separated Recyclable</b> | <b>3%</b>    |       | <b>8</b>   | <b>6%</b>    |       | <b>11</b>  | <b>1%</b>    |       | <b>2</b>   | <b>3%</b>    |       | <b>20</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>0</b>   |
|                                  | <b>Non-recoverable</b>      | <b>24%</b>   |       | <b>60</b>  | <b>4%</b>    |       | <b>7</b>   | <b>1%</b>    |       | <b>4</b>   | <b>10%</b>   |       | <b>72</b>  |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>247</b> | <b>100%</b>  |       | <b>169</b> | <b>100%</b>  |       | <b>307</b> | <b>100%</b>  |       | <b>724</b> |
| <b>Sample Count</b>              |                             |              |       | <b>25</b>  |              |       | <b>15</b>  |              |       | <b>14</b>  |              |       |            |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-3. Detailed Composition: Administrative Buildings

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Compost      |       |           | Total        |       |            |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|------------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  |
| <b>Paper</b>                                  |                         | <b>34.2%</b> |       | <b>52</b> | <b>61.8%</b> |       | <b>76</b> | <b>43.2%</b> |       | <b>83</b> | <b>45.2%</b> |       | <b>211</b> |
| Newspaper                                     | Mixed Recyclable        | 0.4%         | 0.2%  | 1         | 11.5%        | 6.6%  | 14        | 0.1%         | 0.1%  | 0         | 3.2%         | 1.7%  | 15         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 2.4%         | 0.4%  | 4         | 38.8%        | 18.5% | 48        | 0.2%         | 0.2%  | 0         | 11.1%        | 4.9%  | 52         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.1%  | 0         | 0.1%         | 0.2%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0          |
| High-grade Paper                              | Mixed Recyclable        | 0.5%         | 0.3%  | 1         | 2.8%         | 2.1%  | 3         | 0.1%         | 0.0%  | 0         | 0.9%         | 0.6%  | 4          |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 8.3%         | 1.2%  | 13        | 4.1%         | 2.2%  | 5         | 0.3%         | 0.2%  | 1         | 3.9%         | 0.7%  | 18         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 0.9%         | 0.2%  | 1         | 0.9%         | 0.5%  | 1         | 1.8%         | 0.7%  | 3         | 1.2%         | 0.3%  | 6          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.6%         | 0.2%  | 1         | 1.1%         | 0.6%  | 1         | 0.2%         | 0.1%  | 0         | 0.6%         | 0.2%  | 3          |
| Compostable/Soiled Paper                      | Compostable             | 18.5%        | 2.2%  | 28        | 2.4%         | 1.2%  | 3         | 40.0%        | 8.5%  | 77        | 23.1%        | 3.6%  | 108        |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0          |
| Non-recoverable & Composite Paper             | Non-recoverable         | 2.7%         | 1.9%  | 4         | 0.2%         | 0.1%  | 0         | 0.4%         | 0.5%  | 1         | 1.1%         | 0.7%  | 5          |
| <b>Plastics</b>                               |                         | <b>27.6%</b> |       | <b>42</b> | <b>21.4%</b> |       | <b>26</b> | <b>8.5%</b>  |       | <b>16</b> | <b>18.1%</b> |       | <b>85</b>  |
| PET Bottles & Containers                      | Mixed Recyclable        | 2.3%         | 0.5%  | 3         | 9.9%         | 6.7%  | 12        | 0.2%         | 0.1%  | 0         | 3.4%         | 1.8%  | 16         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.4%         | 0.2%  | 1         | 1.5%         | 1.3%  | 2         | 0.0%         | 0.0%  | 0         | 0.5%         | 0.3%  | 2          |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.0%  | 1          |
| Compostable Single-use Food Service Plastics  | Compostable             | 2.2%         | 0.4%  | 3         | 1.0%         | 0.6%  | 1         | 3.1%         | 1.6%  | 6         | 2.2%         | 0.7%  | 10         |
| Rigid Containers                              | Mixed Recyclable        | 3.5%         | 0.4%  | 5         | 3.1%         | 2.0%  | 4         | 0.4%         | 0.2%  | 1         | 2.1%         | 0.6%  | 10         |
| Expanded Polystyrene                          | Separated Recyclable    | 0.6%         | 0.3%  | 1         | 0.5%         | 0.6%  | 1         | 0.0%         | 0.0%  | -         | 0.3%         | 0.2%  | 2          |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 1.5%         | 0.3%  | 2         | 0.2%         | 0.1%  | 0         | 0.2%         | 0.1%  | 0         | 0.6%         | 0.1%  | 3          |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -         | 1.2%         | 0.9%  | 1         | 0.0%         | 0.0%  | 0         | 0.3%         | 0.2%  | 1          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.3%         | 0.1%  | 1         | 1.4%         | 1.1%  | 2         | 0.0%         | 0.0%  | 0         | 0.5%         | 0.3%  | 2          |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 2.1%         | 0.5%  | 3         | 0.2%         | 0.2%  | 0         | 0.1%         | 0.2%  | 0         | 0.8%         | 0.2%  | 4          |
| Compostable Bags                              | Compostable             | 0.4%         | 0.2%  | 1         | 0.0%         | 0.0%  | -         | 4.1%         | 1.3%  | 8         | 1.8%         | 0.5%  | 9          |
| Latex/Nitrile Gloves                          | Non-recoverable         | 1.7%         | 0.7%  | 3         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.6%         | 0.2%  | 3          |
| Other Film                                    | Non-recoverable         | 10.0%        | 1.1%  | 15        | 1.8%         | 1.3%  | 2         | 0.3%         | 0.1%  | 1         | 3.9%         | 0.5%  | 18         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Other Plastic Products                        | Non-recoverable         | 1.9%         | 1.0%  | 3         | 0.3%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.7%         | 0.3%  | 3          |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.7%         | 0.2%  | 1         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.3%         | 0.1%  | 1          |
| <b>Glass</b>                                  |                         | <b>2.4%</b>  |       | <b>4</b>  | <b>7.3%</b>  |       | <b>9</b>  | <b>0.0%</b>  |       | <b>0</b>  | <b>2.7%</b>  |       | <b>13</b>  |
| Beverage Glass                                | Mixed Recyclable        | 1.9%         | 0.7%  | 3         | 5.7%         | 4.2%  | 7         | 0.0%         | 0.1%  | 0         | 2.1%         | 1.1%  | 10         |
| Container Glass                               | Mixed Recyclable        | 0.3%         | 0.1%  | 0         | 1.6%         | 1.0%  | 2         | 0.0%         | 0.0%  | -         | 0.5%         | 0.3%  | 2          |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Lab Glass                                     | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| <b>Metals</b>                                 |                         | <b>3.2%</b>  |       | <b>5</b>  | <b>4.9%</b>  |       | <b>6</b>  | <b>0.2%</b>  |       | <b>0</b>  | <b>2.4%</b>  |       | <b>11</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.4%         | 0.1%  | 1         | 3.0%         | 1.9%  | 4         | 0.1%         | 0.0%  | 0         | 0.9%         | 0.5%  | 4          |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.6%         | 0.2%  | 1         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.2%         | 0.1%  | 1          |
| Other Nonferrous                              | Mixed Recyclable        | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Tin Food Cans                                 | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 1.3%         | 0.9%  | 2         | 0.0%         | 0.0%  | 0         | 0.4%         | 0.3%  | 2          |
| Empty Aerosol Cans                            | Non-recoverable         | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Other Ferrous                                 | Mixed Recyclable        | 0.8%         | 0.6%  | 1         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.3%         | 0.2%  | 1          |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Metal             | Non-recoverable         | 1.0%         | 0.7%  | 2         | 0.4%         | 0.7%  | 1         | 0.0%         | 0.0%  | -         | 0.4%         | 0.3%  | 2          |
| <b>Organics</b>                               |                         | <b>25.7%</b> |       | <b>39</b> | <b>4.3%</b>  |       | <b>5</b>  | <b>35.9%</b> |       | <b>69</b> | <b>24.3%</b> |       | <b>113</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Leaves/Grass/Prunings                         | Compostable             | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0          |
| Other Untreated Wood                          | Compostable             | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.2%         | 0.1%  | 0         | 0.1%         | 0.0%  | 1          |
| Food  | Compostable             | 23.3%        | 3.2%  | 35        | 4.3%         | 2.6%  | 5         | 35.7%        | 8.4%  | 68        | 23.4%        | 3.7%  | 109        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 2.1%         | 3.4%  | 3         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.7%         | 1.1%  | 3          |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-3. Detailed Composition: Administrative Buildings (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |            | Recycling    |       |            | Compost      |       |            | Total        |       |            |
|----------------------------------|-----------------------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|------------|
|                                  |                             | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  |
| <b>Other Materials</b>           |                             | <b>5.6%</b>  |       | <b>9</b>   | <b>0.2%</b>  |       | <b>0</b>   | <b>12.2%</b> |       | <b>23</b>  | <b>6.9%</b>  |       | <b>32</b>  |
| Textiles                         | Separated Recyclable        | 1.0%         | 0.8%  | 2          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.3%         | 0.3%  | 2          |
| Mixed Textiles                   | Separated Recyclable        | 0.3%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.0%  | 0          |
| Leather                          | Non-recoverable             | 0.1%         | 0.2%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.1%  | 0          |
| Disposable Diapers               | Non-recoverable             | 0.5%         | 0.2%  | 1          | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | 0          | 0.2%         | 0.1%  | 1          |
| Animal Waste                     | Non-recoverable             | 0.1%         | 0.2%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.1%  | 0          |
| Rubber Products                  | Non-recoverable             | 0.2%         | 0.1%  | 0          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.1%         | 0.0%  | 0          |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Furniture                        | Non-recoverable             | 1.6%         | 2.7%  | 3          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.5%         | 0.9%  | 2          |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Small Appliances                 | Separated Recyclable        | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Other Electronics                | Separated Recyclable        | 0.4%         | 0.4%  | 1          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1          |
| Ceramics/Porcelain               | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Fines & Miscellaneous            | Non-recoverable             | 1.1%         | 0.3%  | 2          | 0.1%         | 0.2%  | 0          | 12.1%        | 18.0% | 23         | 5.4%         | 7.4%  | 25         |
| <b>CDL Wastes</b>                |                             | <b>0.6%</b>  |       | <b>1</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.2%</b>  |       | <b>1</b>   |
| Dimension Lumber                 | Recoverable C&D             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Treated Wood                     | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Carpet & Padding                 | Non-recoverable             | 0.2%         | 0.3%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          |
| Construction Debris              | Non-recoverable             | 0.4%         | 0.5%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1          |
| <b>Regulated Wastes</b>          |                             | <b>0.7%</b>  |       | <b>1</b>   | <b>0.0%</b>  |       | <b>0</b>   | <b>0.0%</b>  |       | <b>0</b>   | <b>0.2%</b>  |       | <b>1</b>   |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Cleaners                         | Non-recoverable             | 0.2%         | 0.2%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Batteries                        | Separated Recyclable        | 0.1%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Red Bag Medical Waste            | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Other Chemical Waste             | Non-recoverable             | 0.4%         | 0.2%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.1%  | 1          |
|                                  | <b>Mixed Recyclable</b>     | <b>24%</b>   |       | <b>36</b>  | <b>87%</b>   |       | <b>106</b> | <b>3%</b>    |       | <b>7</b>   | <b>32%</b>   |       | <b>149</b> |
|                                  | <b>Compostable</b>          | <b>45%</b>   |       | <b>68</b>  | <b>8%</b>    |       | <b>10</b>  | <b>83%</b>   |       | <b>160</b> | <b>51%</b>   |       | <b>237</b> |
|                                  | <b>Separated Recyclable</b> | <b>5%</b>    |       | <b>8</b>   | <b>2%</b>    |       | <b>3</b>   | <b>0%</b>    |       | <b>1</b>   | <b>2%</b>    |       | <b>11</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>0</b>   |
|                                  | <b>Non-recoverable</b>      | <b>27%</b>   |       | <b>41</b>  | <b>3%</b>    |       | <b>4</b>   | <b>13%</b>   |       | <b>25</b>  | <b>15%</b>   |       | <b>70</b>  |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>152</b> | <b>100%</b>  |       | <b>123</b> | <b>100%</b>  |       | <b>192</b> | <b>100%</b>  |       | <b>467</b> |
| <b>Sample Count</b>              |                             |              |       | <b>20</b>  |              |       | <b>10</b>  |              |       | <b>10</b>  |              |       | <b>467</b> |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-4. Detailed Composition: Arts and Design Buildings

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Compost      |       |           | Total        |       |           |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons |
| <b>Paper</b>                                  |                         | <b>39.6%</b> |       | <b>22</b> | <b>50.3%</b> |       | <b>18</b> | <b>45.5%</b> |       | <b>16</b> | <b>44.3%</b> |       | <b>56</b> |
| Newspaper                                     | Mixed Recyclable        | 1.1%         | 0.5%  | 1         | 1.6%         | 0.8%  | 1         | 0.0%         | 0.0%  | -         | 0.9%         | 0.3%  | 1         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 1.9%         | 0.4%  | 1         | 15.8%        | 13.3% | 6         | 1.5%         | 1.3%  | 1         | 5.8%         | 3.8%  | 7         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | -         | 0.2%         | 0.3%  | 0         | 0.0%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         |
| High-grade Paper                              | Mixed Recyclable        | 1.9%         | 1.0%  | 1         | 4.1%         | 2.8%  | 1         | 0.4%         | 0.5%  | 0         | 2.1%         | 0.9%  | 3         |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 11.7%        | 2.1%  | 6         | 10.2%        | 3.4%  | 4         | 1.1%         | 0.7%  | 0         | 8.4%         | 1.4%  | 11        |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 1.3%         | 0.2%  | 1         | 1.0%         | 0.8%  | 0         | 1.6%         | 1.1%  | 1         | 1.3%         | 0.4%  | 2         |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.4%         | 0.2%  | 0         | 8.3%         | 6.1%  | 3         | 0.2%         | 0.2%  | 0         | 2.6%         | 1.7%  | 3         |
| Compostable/Soiled Paper                      | Compostable             | 20.1%        | 1.5%  | 11        | 8.4%         | 1.6%  | 3         | 40.5%        | 8.5%  | 14        | 22.4%        | 2.5%  | 28        |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Paper             | Non-recoverable         | 1.2%         | 0.5%  | 1         | 0.8%         | 0.3%  | 0         | 0.0%         | 0.1%  | 0         | 0.7%         | 0.2%  | 1         |
| <b>Plastics</b>                               |                         | <b>26.2%</b> |       | <b>14</b> | <b>22.4%</b> |       | <b>8</b>  | <b>9.6%</b>  |       | <b>3</b>  | <b>20.5%</b> |       | <b>26</b> |
| PET Bottles & Containers                      | Mixed Recyclable        | 2.0%         | 0.3%  | 1         | 8.2%         | 3.4%  | 3         | 0.6%         | 0.4%  | 0         | 3.4%         | 1.0%  | 4         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.1%         | 0.0%  | 0         | 1.2%         | 0.5%  | 0         | 0.1%         | 0.1%  | 0         | 0.4%         | 0.1%  | 1         |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.0%  | 0         |
| Compostable Single-use Food Service Plastics  | Compostable             | 2.2%         | 0.2%  | 1         | 1.6%         | 0.6%  | 1         | 5.3%         | 1.7%  | 2         | 2.9%         | 0.5%  | 4         |
| Rigid Containers                              | Mixed Recyclable        | 3.1%         | 0.2%  | 2         | 3.3%         | 1.2%  | 1         | 0.4%         | 0.2%  | 0         | 2.4%         | 0.4%  | 3         |
| Expanded Polystyrene                          | Separated Recyclable    | 0.3%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 1.4%         | 0.1%  | 1         | 0.5%         | 0.1%  | 0         | 0.3%         | 0.1%  | 0         | 0.8%         | 0.1%  | 1         |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.4%         | 0.1%  | 0         | 2.2%         | 1.4%  | 1         | 0.1%         | 0.1%  | 0         | 0.8%         | 0.4%  | 1         |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 1.8%         | 0.4%  | 1         | 2.7%         | 1.5%  | 1         | 0.1%         | 0.2%  | 0         | 1.6%         | 0.5%  | 2         |
| Compostable Bags                              | Compostable             | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 2.4%         | 1.2%  | 1         | 0.7%         | 0.3%  | 1         |
| Latex/Nitrile Gloves                          | Non-recoverable         | 1.1%         | 0.3%  | 1         | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.5%         | 0.1%  | 1         |
| Other Film                                    | Non-recoverable         | 10.8%        | 0.8%  | 6         | 1.1%         | 0.5%  | 0         | 0.4%         | 0.2%  | 0         | 5.1%         | 0.4%  | 6         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Plastic Products                        | Non-recoverable         | 1.7%         | 0.5%  | 1         | 0.9%         | 0.9%  | 0         | 0.0%         | 0.0%  | 0         | 1.0%         | 0.4%  | 1         |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.9%         | 0.5%  | 1         | 0.5%         | 0.3%  | 0         | 0.0%         | 0.0%  | 0         | 0.6%         | 0.2%  | 1         |
| <b>Glass</b>                                  |                         | <b>3.4%</b>  |       | <b>2</b>  | <b>11.2%</b> |       | <b>4</b>  | <b>0.6%</b>  |       | <b>0</b>  | <b>4.9%</b>  |       | <b>6</b>  |
| Beverage Glass                                | Mixed Recyclable        | 2.1%         | 0.6%  | 1         | 10.5%        | 4.0%  | 4         | 0.6%         | 1.0%  | 0         | 4.1%         | 1.2%  | 5         |
| Container Glass                               | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Lab Glass                                     | Non-recoverable         | 1.1%         | 1.6%  | 1         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.5%         | 0.7%  | 1         |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.2%         | 0.2%  | 0         | 0.4%         | 0.7%  | 0         | 0.0%         | 0.0%  | -         | 0.2%         | 0.2%  | 0         |
| <b>Metals</b>                                 |                         | <b>2.4%</b>  |       | <b>1</b>  | <b>6.8%</b>  |       | <b>2</b>  | <b>0.2%</b>  |       | <b>0</b>  | <b>3.0%</b>  |       | <b>4</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.6%         | 0.2%  | 0         | 4.3%         | 2.0%  | 2         | 0.1%         | 0.1%  | 0         | 1.5%         | 0.6%  | 2         |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.5%         | 0.2%  | 0         | 0.0%         | 0.0%  | 0         | 0.2%         | 0.1%  | 0         |
| Other Nonferrous                              | Mixed Recyclable        | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Tin Food Cans                                 | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 1.0%         | 0.5%  | 0         | 0.0%         | 0.0%  | 0         | 0.4%         | 0.1%  | 0         |
| Empty Aerosol Cans                            | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Ferrous                                 | Mixed Recyclable        | 0.8%         | 0.6%  | 0         | 0.4%         | 0.6%  | 0         | 0.0%         | 0.0%  | -         | 0.4%         | 0.3%  | 1         |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.7%         | 0.4%  | 0         | 0.4%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.4%         | 0.2%  | 1         |
| <b>Organics</b>                               |                         | <b>20.3%</b> |       | <b>11</b> | <b>6.3%</b>  |       | <b>2</b>  | <b>44.0%</b> |       | <b>15</b> | <b>22.9%</b> |       | <b>29</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Leaves/Grass/Prunings                         | Compostable             | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         |
| Other Untreated Wood                          | Compostable             | 0.2%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.2%         | 0.1%  | 0         | 0.2%         | 0.1%  | 0         |
| Food  | Compostable             | 19.8%        | 2.5%  | 11        | 6.2%         | 3.6%  | 2         | 43.8%        | 6.0%  | 15        | 22.5%        | 2.3%  | 29        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.



Table B-5. Detailed Composition: Athletic and Recreation Facilities

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Compost      |       |           | Total        |       |            |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|------------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  |
| <b>Paper</b>                                  |                         | <b>31.9%</b> |       | <b>42</b> | <b>34.3%</b> |       | <b>28</b> | <b>28.8%</b> |       | <b>34</b> | <b>31.4%</b> |       | <b>105</b> |
| Newspaper                                     | Mixed Recyclable        | 0.3%         | 0.1%  | 0         | 3.3%         | 3.1%  | 3         | 0.0%         | 0.0%  | 0         | 0.9%         | 0.8%  | 3          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 2.2%         | 0.6%  | 3         | 8.0%         | 7.0%  | 7         | 0.4%         | 0.4%  | 0         | 3.0%         | 1.7%  | 10         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | -         | 0.1%         | 0.2%  | 0         | 0.3%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0          |
| High-grade Paper                              | Mixed Recyclable        | 2.1%         | 1.4%  | 3         | 4.0%         | 2.4%  | 3         | 0.1%         | 0.1%  | 0         | 1.9%         | 0.8%  | 6          |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 6.0%         | 1.1%  | 8         | 9.2%         | 5.4%  | 8         | 0.7%         | 0.3%  | 1         | 4.9%         | 1.4%  | 16         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 1.5%         | 0.5%  | 2         | 3.0%         | 1.9%  | 2         | 0.3%         | 0.2%  | 0         | 1.5%         | 0.5%  | 5          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.6%         | 0.1%  | 1         | 0.8%         | 0.5%  | 1         | 0.3%         | 0.2%  | 0         | 0.5%         | 0.2%  | 2          |
| Compostable/Soiled Paper                      | Compostable             | 18.3%        | 2.3%  | 24        | 5.0%         | 1.5%  | 4         | 26.6%        | 18.5% | 32        | 18.0%        | 6.7%  | 60         |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Paper             | Non-recoverable         | 0.9%         | 0.3%  | 1         | 0.8%         | 1.0%  | 1         | 0.1%         | 0.1%  | 0         | 0.6%         | 0.3%  | 2          |
| <b>Plastics</b>                               |                         | <b>22.8%</b> |       | <b>30</b> | <b>33.9%</b> |       | <b>28</b> | <b>6.5%</b>  |       | <b>8</b>  | <b>19.7%</b> |       | <b>66</b>  |
| PET Bottles & Containers                      | Mixed Recyclable        | 2.5%         | 0.6%  | 3         | 14.7%        | 4.8%  | 12        | 0.5%         | 0.2%  | 1         | 4.8%         | 1.2%  | 16         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.4%         | 0.3%  | 0         | 3.0%         | 2.9%  | 2         | 0.0%         | 0.0%  | 0         | 0.9%         | 0.7%  | 3          |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.5%         | 0.2%  | 1         | 0.6%         | 0.8%  | 0         | 0.0%         | 0.0%  | -         | 0.3%         | 0.2%  | 1          |
| Compostable Single-use Food Service Plastics  | Compostable             | 1.1%         | 0.3%  | 1         | 0.7%         | 0.5%  | 1         | 0.9%         | 0.7%  | 1         | 0.9%         | 0.3%  | 3          |
| Rigid Containers                              | Mixed Recyclable        | 2.7%         | 0.6%  | 4         | 2.4%         | 0.8%  | 2         | 0.5%         | 0.2%  | 1         | 1.8%         | 0.3%  | 6          |
| Expanded Polystyrene                          | Separated Recyclable    | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0          |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 1.1%         | 0.2%  | 1         | 0.9%         | 0.6%  | 1         | 0.2%         | 0.1%  | 0         | 0.7%         | 0.2%  | 2          |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | 0         | 0.9%         | 1.4%  | 1         | 0.0%         | 0.0%  | -         | 0.2%         | 0.3%  | 1          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.1%         | 0.0%  | 0         | 4.7%         | 2.0%  | 4         | 0.2%         | 0.1%  | 0         | 1.3%         | 0.5%  | 4          |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 1.8%         | 0.3%  | 2         | 2.2%         | 2.1%  | 2         | 1.2%         | 1.4%  | 1         | 1.7%         | 0.7%  | 6          |
| Compostable Bags                              | Compostable             | 0.3%         | 0.1%  | 0         | 0.7%         | 1.0%  | 1         | 1.7%         | 0.5%  | 2         | 0.9%         | 0.3%  | 3          |
| Latex/Nitrile Gloves                          | Non-recoverable         | 1.1%         | 0.4%  | 1         | 0.2%         | 0.1%  | 0         | 0.9%         | 0.9%  | 1         | 0.8%         | 0.4%  | 3          |
| Other Film                                    | Non-recoverable         | 8.5%         | 0.9%  | 11        | 0.9%         | 0.4%  | 1         | 0.2%         | 0.1%  | 0         | 3.7%         | 0.4%  | 12         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Other Plastic Products                        | Non-recoverable         | 1.5%         | 0.8%  | 2         | 1.8%         | 2.7%  | 2         | 0.0%         | 0.0%  | 0         | 1.0%         | 0.7%  | 3          |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.8%         | 0.8%  | 1         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.4%         | 0.3%  | 1          |
| <b>Glass</b>                                  |                         | <b>1.5%</b>  |       | <b>2</b>  | <b>6.9%</b>  |       | <b>6</b>  | <b>0.1%</b>  |       | <b>0</b>  | <b>2.3%</b>  |       | <b>8</b>   |
| Beverage Glass                                | Mixed Recyclable        | 1.4%         | 0.5%  | 2         | 6.1%         | 3.4%  | 5         | 0.1%         | 0.1%  | 0         | 2.1%         | 0.9%  | 7          |
| Container Glass                               | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 0.4%         | 0.5%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Lab Glass                                     | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.3%         | 0.5%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| <b>Metals</b>                                 |                         | <b>3.6%</b>  |       | <b>5</b>  | <b>3.7%</b>  |       | <b>3</b>  | <b>0.8%</b>  |       | <b>1</b>  | <b>2.7%</b>  |       | <b>9</b>   |
| Aluminum Cans                                 | Mixed Recyclable        | 0.4%         | 0.1%  | 0         | 3.2%         | 3.0%  | 3         | 0.0%         | 0.0%  | 0         | 0.9%         | 0.7%  | 3          |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.5%         | 0.4%  | 1         | 0.2%         | 0.1%  | 0         | 0.7%         | 1.0%  | 1         | 0.5%         | 0.4%  | 2          |
| Other Nonferrous                              | Mixed Recyclable        | 0.3%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Tin Food Cans                                 | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Empty Aerosol Cans                            | Non-recoverable         | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0          |
| Other Ferrous                                 | Mixed Recyclable        | 1.4%         | 1.6%  | 2         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.0%  | 0         | 0.6%         | 0.6%  | 2          |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.9%         | 0.7%  | 1         | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.4%         | 0.3%  | 1          |
| <b>Organics</b>                               |                         | <b>31.7%</b> |       | <b>42</b> | <b>19.1%</b> |       | <b>16</b> | <b>63.3%</b> |       | <b>76</b> | <b>39.9%</b> |       | <b>133</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Leaves/Grass/Prunings                         | Compostable             | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 4.1%         | 6.8%  | 5         | 1.5%         | 2.4%  | 5          |
| Other Untreated Wood                          | Compostable             | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 1.5%         | 2.6%  | 2         | 0.6%         | 0.9%  | 2          |
| Food  | Compostable             | 31.3%        | 3.2%  | 41        | 19.1%        | 3.2%  | 16        | 57.7%        | 19.0% | 69        | 37.7%        | 6.9%  | 126        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-5. Detailed Composition: Athletic and Recreation Facilities (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |            | Recycling    |       |           | Compost      |       |            | Total        |       |            |
|----------------------------------|-----------------------------|--------------|-------|------------|--------------|-------|-----------|--------------|-------|------------|--------------|-------|------------|
|                                  |                             | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  |
| <b>Other Materials</b>           |                             | <b>6.7%</b>  |       | <b>9</b>   | <b>1.0%</b>  |       | <b>1</b>  | <b>0.4%</b>  |       | <b>1</b>   | <b>3.0%</b>  |       | <b>10</b>  |
| Textiles                         | Separated Recyclable        | 2.0%         | 0.6%  | 3          | 0.6%         | 0.5%  | 1         | 0.4%         | 0.2%  | 0          | 1.1%         | 0.3%  | 4          |
| Mixed Textiles                   | Separated Recyclable        | 1.3%         | 0.7%  | 2          | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | 0          | 0.5%         | 0.3%  | 2          |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Disposable Diapers               | Non-recoverable             | 1.0%         | 0.6%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          | 0.4%         | 0.2%  | 1          |
| Animal Waste                     | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          |
| Rubber Products                  | Non-recoverable             | 0.6%         | 0.5%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.2%         | 0.2%  | 1          |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Small Appliances                 | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Ceramics/Porcelain               | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Fines & Miscellaneous            | Non-recoverable             | 1.5%         | 0.7%  | 2          | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | 0          | 0.7%         | 0.3%  | 2          |
| <b>CDL Wastes</b>                |                             | <b>1.1%</b>  |       | <b>2</b>   | <b>0.0%</b>  |       | <b>0</b>  | <b>0.0%</b>  |       | <b>-</b>   | <b>0.5%</b>  |       | <b>2</b>   |
| Dimension Lumber                 | Recoverable C&D             | 0.4%         | 0.3%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.2%         | 0.1%  | 1          |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Treated Wood                     | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| New Gypsum Scrap                 | Recoverable C&D             | 0.1%         | 0.2%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.1%  | 0          |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Carpet & Padding                 | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Construction Debris              | Non-recoverable             | 0.4%         | 0.6%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.2%         | 0.2%  | 1          |
| <b>Regulated Wastes</b>          |                             | <b>0.6%</b>  |       | <b>1</b>   | <b>1.0%</b>  |       | <b>1</b>  | <b>0.0%</b>  |       | <b>-</b>   | <b>0.5%</b>  |       | <b>2</b>   |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Adhesives/Glues                  | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Batteries                        | Separated Recyclable        | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Red Bag Medical Waste            | Non-recoverable             | 0.2%         | 0.3%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          |
| Other Chemical Waste             | Non-recoverable             | 0.2%         | 0.1%  | 0          | 1.0%         | 1.6%  | 1         | 0.0%         | 0.0%  | -          | 0.3%         | 0.4%  | 1          |
|                                  | <b>Mixed Recyclable</b>     | <b>23%</b>   |       | <b>30</b>  | <b>60%</b>   |       | <b>49</b> | <b>4%</b>    |       | <b>5</b>   | <b>25%</b>   |       | <b>84</b>  |
|                                  | <b>Compostable</b>          | <b>51%</b>   |       | <b>68</b>  | <b>26%</b>   |       | <b>21</b> | <b>93%</b>   |       | <b>111</b> | <b>60%</b>   |       | <b>199</b> |
|                                  | <b>Separated Recyclable</b> | <b>6%</b>    |       | <b>7</b>   | <b>8%</b>    |       | <b>6</b>  | <b>2%</b>    |       | <b>2</b>   | <b>5%</b>    |       | <b>16</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>1%</b>    |       | <b>1</b>   | <b>0%</b>    |       | <b>0</b>  | <b>0%</b>    |       | <b>0</b>   | <b>0%</b>    |       | <b>1</b>   |
|                                  | <b>Non-recoverable</b>      | <b>20%</b>   |       | <b>26</b>  | <b>6%</b>    |       | <b>5</b>  | <b>2%</b>    |       | <b>2</b>   | <b>10%</b>   |       | <b>34</b>  |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>132</b> | <b>100%</b>  |       | <b>82</b> | <b>100%</b>  |       | <b>119</b> | <b>100%</b>  |       | <b>333</b> |
| <b>Sample Count</b>              |                             |              |       | <b>20</b>  |              |       | <b>11</b> |              |       | <b>10</b>  |              |       | <b>333</b> |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

WASTE CHARACTERIZATION STUDY  
APPENDIX B. DETAILED COMPOSITION RESULTS

Table B-6. Detailed Composition: Campus Laboratories

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Compost      |       |           | Total        |       |            |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|------------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  |
| <b>Paper</b>                                  |                         | <b>29.3%</b> |       | <b>81</b> | <b>45.3%</b> |       | <b>34</b> | <b>31.8%</b> |       | <b>35</b> | <b>32.5%</b> |       | <b>149</b> |
| Newspaper                                     | Mixed Recyclable        | 0.8%         | 1.1%  | 2         | 1.3%         | 1.7%  | 1         | 0.0%         | 0.0%  | -         | 0.7%         | 0.7%  | 3          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 2.2%         | 0.6%  | 6         | 4.6%         | 2.5%  | 3         | 0.2%         | 0.1%  | 0         | 2.1%         | 0.5%  | 10         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.3%         | 0.3%  | 0         | 0.1%         | 0.1%  | 1          |
| High-grade Paper                              | Mixed Recyclable        | 0.9%         | 0.2%  | 3         | 4.1%         | 2.2%  | 3         | 0.0%         | 0.0%  | 0         | 1.2%         | 0.4%  | 6          |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 5.2%         | 0.9%  | 14        | 19.1%        | 14.0% | 14        | 0.9%         | 0.6%  | 1         | 6.4%         | 2.3%  | 30         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 1.1%         | 0.3%  | 3         | 0.5%         | 0.3%  | 0         | 1.0%         | 0.7%  | 1         | 1.0%         | 0.3%  | 5          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.2%         | 0.1%  | 1         | 0.5%         | 0.2%  | 0         | 0.0%         | 0.0%  | 0         | 0.2%         | 0.0%  | 1          |
| Compostable/Soiled Paper                      | Compostable             | 17.6%        | 1.9%  | 48        | 3.8%         | 3.1%  | 3         | 29.2%        | 7.2%  | 32        | 18.1%        | 2.1%  | 83         |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Paper             | Non-recoverable         | 1.1%         | 0.3%  | 3         | 11.5%        | 12.7% | 9         | 0.0%         | 0.0%  | 0         | 2.5%         | 2.1%  | 12         |
| <b>Plastics</b>                               |                         | <b>22.9%</b> |       | <b>63</b> | <b>21.4%</b> |       | <b>16</b> | <b>5.4%</b>  |       | <b>6</b>  | <b>18.4%</b> |       | <b>85</b>  |
| PET Bottles & Containers                      | Mixed Recyclable        | 1.1%         | 0.2%  | 3         | 9.4%         | 6.9%  | 7         | 0.1%         | 0.1%  | 0         | 2.2%         | 1.1%  | 10         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 1.6%         | 1.2%  | 1         | 0.0%         | 0.0%  | 0         | 0.4%         | 0.2%  | 2          |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.3%         | 0.1%  | 1         | 0.5%         | 0.5%  | 0         | 0.0%         | 0.0%  | -         | 0.2%         | 0.1%  | 1          |
| Compostable Single-use Food Service Plastics  | Compostable             | 1.0%         | 0.2%  | 3         | 1.0%         | 0.4%  | 1         | 1.1%         | 0.5%  | 1         | 1.0%         | 0.2%  | 5          |
| Rigid Containers                              | Mixed Recyclable        | 1.6%         | 0.2%  | 4         | 2.6%         | 0.7%  | 2         | 0.2%         | 0.1%  | 0         | 1.4%         | 0.2%  | 7          |
| Expanded Polystyrene                          | Separated Recyclable    | 0.4%         | 0.1%  | 1         | 0.4%         | 0.6%  | 0         | 0.0%         | 0.0%  | -         | 0.3%         | 0.1%  | 1          |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 0.7%         | 0.1%  | 2         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.0%  | 0         | 0.5%         | 0.1%  | 2          |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.2%         | 0.0%  | 1         | 2.4%         | 0.9%  | 2         | 0.1%         | 0.1%  | 0         | 0.5%         | 0.2%  | 2          |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 1.4%         | 0.3%  | 4         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.9%         | 0.2%  | 4          |
| Compostable Bags                              | Compostable             | 0.2%         | 0.1%  | 1         | 0.0%         | 0.0%  | -         | 3.2%         | 1.2%  | 3         | 0.9%         | 0.3%  | 4          |
| Latex/Nitrile Gloves                          | Non-recoverable         | 3.6%         | 0.7%  | 10        | 0.1%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         | 2.2%         | 0.4%  | 10         |
| Other Film                                    | Non-recoverable         | 7.7%         | 0.8%  | 21        | 1.6%         | 1.2%  | 1         | 0.2%         | 0.2%  | 0         | 5.0%         | 0.5%  | 23         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.5%         | 0.3%  | 1         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.3%         | 0.2%  | 1          |
| Other Plastic Products                        | Non-recoverable         | 3.3%         | 1.2%  | 9         | 1.0%         | 0.8%  | 1         | 0.1%         | 0.2%  | 0         | 2.2%         | 0.7%  | 10         |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.7%         | 0.3%  | 2         | 0.5%         | 0.6%  | 0         | 0.0%         | 0.0%  | 0         | 0.5%         | 0.2%  | 2          |
| <b>Glass</b>                                  |                         | <b>6.1%</b>  |       | <b>17</b> | <b>19.7%</b> |       | <b>15</b> | <b>0.1%</b>  |       | <b>0</b>  | <b>6.9%</b>  |       | <b>32</b>  |
| Beverage Glass                                | Mixed Recyclable        | 0.7%         | 0.4%  | 2         | 18.6%        | 12.6% | 14        | 0.1%         | 0.2%  | 0         | 3.4%         | 2.0%  | 16         |
| Container Glass                               | Mixed Recyclable        | 0.2%         | 0.2%  | 0         | 1.1%         | 1.0%  | 1         | 0.0%         | 0.0%  | -         | 0.3%         | 0.2%  | 1          |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Lab Glass                                     | Non-recoverable         | 4.6%         | 2.3%  | 13        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 2.8%         | 1.4%  | 13         |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.7%         | 0.7%  | 2         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.4%         | 0.4%  | 2          |
| <b>Metals</b>                                 |                         | <b>8.2%</b>  |       | <b>22</b> | <b>6.7%</b>  |       | <b>5</b>  | <b>0.1%</b>  |       | <b>0</b>  | <b>6.0%</b>  |       | <b>28</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.4%         | 0.2%  | 1         | 5.1%         | 2.4%  | 4         | 0.0%         | 0.0%  | 0         | 1.1%         | 0.4%  | 5          |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.3%         | 0.1%  | 1         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.2%         | 0.0%  | 1          |
| Other Nonferrous                              | Mixed Recyclable        | 0.8%         | 0.7%  | 2         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.5%         | 0.4%  | 2          |
| Tin Food Cans                                 | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 1.5%         | 0.7%  | 1         | 0.0%         | 0.0%  | 0         | 0.4%         | 0.1%  | 2          |
| Empty Aerosol Cans                            | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 0          |
| Other Ferrous                                 | Mixed Recyclable        | 3.0%         | 2.9%  | 8         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 1.8%         | 1.7%  | 8          |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Metal             | Non-recoverable         | 3.5%         | 2.0%  | 10        | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 2.1%         | 1.2%  | 10         |
| <b>Organics</b>                               |                         | <b>18.9%</b> |       | <b>52</b> | <b>6.6%</b>  |       | <b>5</b>  | <b>61.7%</b> |       | <b>68</b> | <b>27.2%</b> |       | <b>125</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 0          |
| Leaves/Grass/Prunings                         | Compostable             | 2.4%         | 3.2%  | 7         | 0.0%         | 0.0%  | -         | 0.5%         | 0.5%  | 1         | 1.6%         | 1.9%  | 7          |
| Other Untreated Wood                          | Compostable             | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.0%  | 0          |
| Food  | Compostable             | 16.3%        | 2.9%  | 45        | 6.6%         | 2.8%  | 5         | 61.0%        | 13.0% | 67        | 25.4%        | 3.6%  | 117        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0          |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

WASTE CHARACTERIZATION STUDY  
APPENDIX B. DETAILED COMPOSITION RESULTS

Table B-6. Detailed Composition: Campus Laboratories (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |            | Recycling    |       |           | Compost      |       |            | Total        |       |            |
|----------------------------------|-----------------------------|--------------|-------|------------|--------------|-------|-----------|--------------|-------|------------|--------------|-------|------------|
|                                  |                             | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  |
| <b>Other Materials</b>           |                             | <b>7.8%</b>  |       | <b>21</b>  | <b>0.2%</b>  |       | <b>0</b>  | <b>0.6%</b>  |       | <b>1</b>   | <b>4.8%</b>  |       | <b>22</b>  |
| Textiles                         | Separated Recyclable        | 0.9%         | 0.4%  | 2          | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0          | 0.5%         | 0.2%  | 2          |
| Mixed Textiles                   | Separated Recyclable        | 0.9%         | 0.4%  | 2          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.5%         | 0.3%  | 2          |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Disposable Diapers               | Non-recoverable             | 0.5%         | 0.1%  | 1          | 0.0%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0          | 0.3%         | 0.1%  | 2          |
| Animal Waste                     | Non-recoverable             | 0.7%         | 0.6%  | 2          | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 0          | 0.4%         | 0.3%  | 2          |
| Rubber Products                  | Non-recoverable             | 0.6%         | 0.4%  | 2          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.4%         | 0.3%  | 2          |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Small Appliances                 | Separated Recyclable        | 1.0%         | 0.8%  | 3          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.6%         | 0.5%  | 3          |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Other Electronics                | Separated Recyclable        | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.1%         | 0.0%  | 0          |
| Ceramics/Porcelain               | Non-recoverable             | 1.7%         | 2.4%  | 5          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 1.0%         | 1.5%  | 5          |
| Fines & Miscellaneous            | Non-recoverable             | 1.5%         | 0.9%  | 4          | 0.1%         | 0.1%  | 0         | 0.5%         | 0.8%  | 1          | 1.0%         | 0.6%  | 5          |
| <b>CDL Wastes</b>                |                             | <b>2.1%</b>  |       | <b>6</b>   | <b>0.0%</b>  |       | <b>-</b>  | <b>0.2%</b>  |       | <b>0</b>   | <b>1.3%</b>  |       | <b>6</b>   |
| Dimension Lumber                 | Recoverable C&D             | 1.0%         | 0.7%  | 3          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.6%         | 0.4%  | 3          |
| Clean Engineered Wood            | Non-recoverable             | 0.3%         | 0.2%  | 1          | 0.0%         | 0.0%  | -         | 0.2%         | 0.3%  | 0          | 0.2%         | 0.2%  | 1          |
| Treated Wood                     | Non-recoverable             | 0.1%         | 0.2%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Fiberglass Insulation            | Non-recoverable             | 0.5%         | 0.7%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.3%         | 0.4%  | 1          |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Carpet & Padding                 | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Construction Debris              | Non-recoverable             | 0.2%         | 0.2%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          |
| <b>Regulated Wastes</b>          |                             | <b>4.8%</b>  |       | <b>13</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.1%</b>  |       | <b>0</b>   | <b>2.9%</b>  |       | <b>13</b>  |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Explosives                       | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.1%  | 0          |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 2.5%         | 2.4%  | 7          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 1.5%         | 1.4%  | 7          |
| Red Bag Medical Waste            | Non-recoverable             | 1.4%         | 1.3%  | 4          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.8%         | 0.8%  | 4          |
| Other Chemical Waste             | Non-recoverable             | 0.8%         | 0.5%  | 2          | 0.0%         | 0.0%  | -         | 0.1%         | 0.2%  | 0          | 0.5%         | 0.3%  | 2          |
|                                  | <b>Mixed Recyclable</b>     | <b>19%</b>   |       | <b>53</b>  | <b>70%</b>   |       | <b>52</b> | <b>3%</b>    |       | <b>3</b>   | <b>24%</b>   |       | <b>108</b> |
|                                  | <b>Compostable</b>          | <b>38%</b>   |       | <b>104</b> | <b>11%</b>   |       | <b>9</b>  | <b>95%</b>   |       | <b>105</b> | <b>47%</b>   |       | <b>217</b> |
|                                  | <b>Separated Recyclable</b> | <b>5%</b>    |       | <b>13</b>  | <b>3%</b>    |       | <b>2</b>  | <b>0%</b>    |       | <b>0</b>   | <b>3%</b>    |       | <b>16</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>1%</b>    |       | <b>3</b>   | <b>0%</b>    |       | <b>0</b>  | <b>0%</b>    |       | <b>0</b>   | <b>1%</b>    |       | <b>3</b>   |
|                                  | <b>Non-recoverable</b>      | <b>37%</b>   |       | <b>103</b> | <b>15%</b>   |       | <b>11</b> | <b>1%</b>    |       | <b>2</b>   | <b>25%</b>   |       | <b>116</b> |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>275</b> | <b>100%</b>  |       | <b>74</b> | <b>100%</b>  |       | <b>110</b> | <b>100%</b>  |       | <b>460</b> |
| <b>Sample Count</b>              |                             |              |       | <b>25</b>  |              |       | <b>10</b> |              |       | <b>14</b>  |              |       |            |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

WASTE CHARACTERIZATION STUDY  
APPENDIX B. DETAILED COMPOSITION RESULTS

Table B-7. Detailed Composition: Health Sciences

| Material Class / Material Type                | Recoverability Category | Garbage      |       |            | Recycling    |       |           | Compost      |       |           | Total        |       |            |
|---|-------------------------|--------------|-------|------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|------------|
|   |                         | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  |
| <b>Paper</b>                                  |                         | <b>39.8%</b> |       | <b>231</b> | <b>25.8%</b> |       | <b>18</b> | <b>43.7%</b> |       | <b>53</b> | <b>39.2%</b> |       | <b>302</b> |
| Newspaper                                     | Mixed Recyclable        | 0.4%         | 0.4%  | 2          | 1.1%         | 0.7%  | 1         | 0.0%         | 0.0%  | 0         | 0.4%         | 0.3%  | 3          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 1.1%         | 0.4%  | 7          | 2.4%         | 1.1%  | 2         | 0.2%         | 0.1%  | 0         | 1.1%         | 0.3%  | 8          |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | -          | 0.2%         | 0.3%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0          |
| High-grade Paper                              | Mixed Recyclable        | 3.5%         | 2.0%  | 20         | 2.8%         | 1.2%  | 2         | 0.1%         | 0.1%  | 0         | 2.9%         | 1.5%  | 22         |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 11.8%        | 3.3%  | 69         | 6.4%         | 1.6%  | 5         | 0.8%         | 0.5%  | 1         | 9.6%         | 2.5%  | 74         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 0.4%         | 0.2%  | 2          | 0.8%         | 0.2%  | 1         | 1.2%         | 0.5%  | 1         | 0.6%         | 0.2%  | 4          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.1%         | 0.1%  | 1          | 5.3%         | 1.3%  | 4         | 0.2%         | 0.1%  | 0         | 0.6%         | 0.1%  | 5          |
| Compostable/Soiled Paper                      | Compostable             | 17.0%        | 4.1%  | 99         | 5.4%         | 3.3%  | 4         | 40.7%        | 7.0%  | 49        | 19.7%        | 3.3%  | 152        |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Paper             | Non-recoverable         | 5.4%         | 1.7%  | 31         | 1.5%         | 1.4%  | 1         | 0.4%         | 0.2%  | 0         | 4.3%         | 1.2%  | 33         |
| <b>Plastics</b>                               |                         | <b>10.8%</b> |       | <b>63</b>  | <b>36.6%</b> |       | <b>26</b> | <b>10.6%</b> |       | <b>13</b> | <b>13.1%</b> |       | <b>101</b> |
| PET Bottles & Containers                      | Mixed Recyclable        | 0.4%         | 0.2%  | 2          | 14.7%        | 5.7%  | 10        | 0.3%         | 0.1%  | 0         | 1.7%         | 0.5%  | 13         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.0%         | 0.0%  | 0          | 5.1%         | 3.4%  | 4         | 0.1%         | 0.1%  | 0         | 0.5%         | 0.3%  | 4          |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.1%         | 0.1%  | 1          | 0.5%         | 0.5%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 1          |
| Compostable Single-use Food Service Plastics  | Compostable             | 0.3%         | 0.2%  | 2          | 1.7%         | 0.6%  | 1         | 5.3%         | 2.4%  | 6         | 1.2%         | 0.4%  | 9          |
| Rigid Containers                              | Mixed Recyclable        | 0.5%         | 0.2%  | 3          | 4.0%         | 1.6%  | 3         | 0.5%         | 0.1%  | 1         | 0.8%         | 0.2%  | 6          |
| Expanded Polystyrene                          | Separated Recyclable    | 0.6%         | 0.2%  | 3          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.5%         | 0.2%  | 3          |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 0.4%         | 0.2%  | 2          | 0.2%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.3%         | 0.1%  | 3          |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.0%         | 0.0%  | 0          | 3.3%         | 0.9%  | 2         | 0.1%         | 0.1%  | 0         | 0.3%         | 0.1%  | 3          |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 0.8%         | 0.3%  | 4          | 2.2%         | 2.4%  | 2         | 0.1%         | 0.1%  | 0         | 0.8%         | 0.3%  | 6          |
| Compostable Bags                              | Compostable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 3.6%         | 1.3%  | 4         | 0.6%         | 0.2%  | 4          |
| Latex/Nitrile Gloves                          | Non-recoverable         | 0.9%         | 0.3%  | 5          | 0.4%         | 0.3%  | 0         | 0.1%         | 0.1%  | 0         | 0.7%         | 0.2%  | 5          |
| Other Film                                    | Non-recoverable         | 3.7%         | 1.0%  | 21         | 1.4%         | 1.1%  | 1         | 0.3%         | 0.1%  | 0         | 2.9%         | 0.7%  | 23         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.3%         | 0.3%  | 2          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.2%         | 0.2%  | 2          |
| Other Plastic Products                        | Non-recoverable         | 1.0%         | 0.4%  | 6          | 2.5%         | 2.1%  | 2         | 0.0%         | 0.0%  | 0         | 1.0%         | 0.4%  | 7          |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 1.8%         | 1.0%  | 10         | 0.5%         | 0.7%  | 0         | 0.0%         | 0.0%  | 0         | 1.4%         | 0.8%  | 11         |
| <b>Glass</b>                                  |                         | <b>5.0%</b>  |       | <b>29</b>  | <b>10.4%</b> |       | <b>7</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>4.7%</b>  |       | <b>36</b>  |
| Beverage Glass                                | Mixed Recyclable        | 0.1%         | 0.2%  | 1          | 8.0%         | 2.6%  | 6         | 0.0%         | 0.0%  | -         | 0.8%         | 0.3%  | 6          |
| Container Glass                               | Mixed Recyclable        | 0.0%         | 0.0%  | 0          | 0.1%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Lab Glass                                     | Non-recoverable         | 4.8%         | 3.0%  | 28         | 2.3%         | 3.1%  | 2         | 0.0%         | 0.0%  | -         | 3.9%         | 2.3%  | 30         |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| <b>Metals</b>                                 |                         | <b>0.5%</b>  |       | <b>3</b>   | <b>14.8%</b> |       | <b>10</b> | <b>0.3%</b>  |       | <b>0</b>  | <b>1.8%</b>  |       | <b>14</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.2%         | 0.1%  | 1          | 4.0%         | 1.2%  | 3         | 0.0%         | 0.0%  | 0         | 0.5%         | 0.1%  | 4          |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.1%         | 0.1%  | 0          | 0.2%         | 0.2%  | 0         | 0.2%         | 0.1%  | 0         | 0.1%         | 0.0%  | 1          |
| Other Nonferrous                              | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 1.0%         | 1.4%  | 1         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 1          |
| Tin Food Cans                                 | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 9.4%         | 5.2%  | 7         | 0.0%         | 0.0%  | -         | 0.9%         | 0.5%  | 7          |
| Empty Aerosol Cans                            | Non-recoverable         | 0.0%         | 0.0%  | 0          | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Other Ferrous                                 | Mixed Recyclable        | 0.1%         | 0.1%  | 1          | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 1          |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.1%         | 0.2%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 1          |
| <b>Organics</b>                               |                         | <b>4.2%</b>  |       | <b>24</b>  | <b>3.3%</b>  |       | <b>2</b>  | <b>44.9%</b> |       | <b>54</b> | <b>10.5%</b> |       | <b>81</b>  |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Leaves/Grass/Prunings                         | Compostable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | 0          |
| Other Untreated Wood                          | Compostable             | 0.0%         | 0.1%  | 0          | 0.0%         | 0.0%  | 0         | 0.1%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0          |
| Food  | Compostable             | 4.1%         | 1.6%  | 24         | 3.3%         | 1.6%  | 2         | 44.7%        | 8.6%  | 54        | 10.4%        | 1.8%  | 80         |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0          |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-7. Detailed Composition: Health Sciences (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |            | Recycling    |       |           | Compost      |       |            | Total        |       |            |
|----------------------------------|-----------------------------|--------------|-------|------------|--------------|-------|-----------|--------------|-------|------------|--------------|-------|------------|
|                                  |                             | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  |
| <b>Other Materials</b>           |                             | <b>2.5%</b>  |       | <b>15</b>  | <b>5.4%</b>  |       | <b>4</b>  | <b>0.4%</b>  |       | <b>0</b>   | <b>2.5%</b>  |       | <b>19</b>  |
| Textiles                         | Separated Recyclable        | 0.4%         | 0.4%  | 3          | 0.5%         | 0.5%  | 0         | 0.2%         | 0.2%  | 0          | 0.4%         | 0.3%  | 3          |
| Mixed Textiles                   | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Disposable Diapers               | Non-recoverable             | 0.6%         | 0.6%  | 4          | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          | 0.5%         | 0.4%  | 4          |
| Animal Waste                     | Non-recoverable             | 0.2%         | 0.3%  | 1          | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          | 0.2%         | 0.2%  | 1          |
| Rubber Products                  | Non-recoverable             | 0.1%         | 0.2%  | 1          | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -          | 0.1%         | 0.2%  | 1          |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Small Appliances                 | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | -          | 4.7%         | 6.6%  | 3         | 0.0%         | 0.0%  | -          | 0.4%         | 0.6%  | 3          |
| Ceramics/Porcelain               | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Fines & Miscellaneous            | Non-recoverable             | 1.2%         | 1.2%  | 7          | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0          | 0.9%         | 0.9%  | 7          |
| <b>CDL Wastes</b>                |                             | <b>0.1%</b>  |       | <b>0</b>   | <b>3.0%</b>  |       | <b>2</b>  | <b>0.0%</b>  |       | <b>-</b>   | <b>0.3%</b>  |       | <b>3</b>   |
| Dimension Lumber                 | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Treated Wood                     | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Carpet & Padding                 | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Construction Debris              | Non-recoverable             | 0.0%         | 0.0%  | -          | 3.0%         | 4.3%  | 2         | 0.0%         | 0.0%  | -          | 0.3%         | 0.4%  | 2          |
| <b>Regulated Wastes</b>          |                             | <b>37.1%</b> |       | <b>216</b> | <b>0.6%</b>  |       | <b>0</b>  | <b>0.1%</b>  |       | <b>0</b>   | <b>28.0%</b> |       | <b>216</b> |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | 0          |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 4.9%         | 3.4%  | 28         | 0.6%         | 0.8%  | 0         | 0.0%         | 0.0%  | -          | 3.7%         | 2.5%  | 29         |
| Red Bag Medical Waste            | Non-recoverable             | 30.9%        | 8.7%  | 179        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 23.2%        | 6.5%  | 179        |
| Other Chemical Waste             | Non-recoverable             | 1.4%         | 2.0%  | 8          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          | 1.0%         | 1.5%  | 8          |
|                                  | <b>Mixed Recyclable</b>     | <b>19%</b>   |       | <b>110</b> | <b>66%</b>   |       | <b>46</b> | <b>4%</b>    |       | <b>4</b>   | <b>21%</b>   |       | <b>161</b> |
|                                  | <b>Compostable</b>          | <b>22%</b>   |       | <b>125</b> | <b>11%</b>   |       | <b>7</b>  | <b>95%</b>   |       | <b>114</b> | <b>32%</b>   |       | <b>247</b> |
|                                  | <b>Separated Recyclable</b> | <b>2%</b>    |       | <b>10</b>  | <b>11%</b>   |       | <b>8</b>  | <b>0%</b>    |       | <b>1</b>   | <b>2%</b>    |       | <b>19</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>0</b>   | <b>0%</b>    |       | <b>0</b>  | <b>0%</b>    |       | <b>0</b>   | <b>0%</b>    |       | <b>0</b>   |
|                                  | <b>Non-recoverable</b>      | <b>58%</b>   |       | <b>335</b> | <b>13%</b>   |       | <b>9</b>  | <b>1%</b>    |       | <b>1</b>   | <b>45%</b>   |       | <b>345</b> |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>581</b> | <b>100%</b>  |       | <b>70</b> | <b>100%</b>  |       | <b>121</b> | <b>100%</b>  |       | <b>772</b> |
| <b>Sample Count</b>              |                             |              |       | <b>29</b>  |              |       | <b>11</b> |              |       | <b>14</b>  |              |       | <b>772</b> |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-8. Detailed Composition: Maintenance Buildings

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Compost      |       |           | Total        |       |           |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons |
| <b>Paper</b>                                  |                         | <b>18.9%</b> |       | <b>38</b> | <b>45.4%</b> |       | <b>8</b>  | <b>35.9%</b> |       | <b>8</b>  | <b>22.5%</b> |       | <b>54</b> |
| Newspaper                                     | Mixed Recyclable        | 0.3%         | 0.2%  | 1         | 2.1%         | 1.1%  | 0         | 0.0%         | 0.0%  | -         | 0.4%         | 0.2%  | 1         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 1.7%         | 0.4%  | 3         | 4.5%         | 1.8%  | 1         | 0.1%         | 0.1%  | 0         | 1.8%         | 0.4%  | 4         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | -         | 0.2%         | 0.1%  | 0         | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         |
| High-grade Paper                              | Mixed Recyclable        | 0.9%         | 0.7%  | 2         | 17.6%        | 7.9%  | 3         | 0.0%         | 0.1%  | 0         | 2.1%         | 0.8%  | 5         |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 4.7%         | 1.7%  | 9         | 13.6%        | 9.2%  | 2         | 1.1%         | 0.6%  | 0         | 5.0%         | 1.6%  | 12        |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 0.5%         | 0.2%  | 1         | 1.5%         | 1.2%  | 0         | 0.7%         | 0.8%  | 0         | 0.6%         | 0.2%  | 1         |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.1%         | 0.0%  | 0         | 0.3%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.0%  | 0         |
| Compostable/Soiled Paper                      | Compostable             | 7.8%         | 2.7%  | 16        | 2.7%         | 2.1%  | 0         | 33.2%        | 12.8% | 8         | 9.9%         | 2.6%  | 24        |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -         | 2.1%         | 3.1%  | 0         | 0.0%         | 0.0%  | -         | 0.2%         | 0.2%  | 0         |
| Non-recoverable & Composite Paper             | Non-recoverable         | 2.9%         | 1.3%  | 6         | 0.7%         | 0.3%  | 0         | 0.5%         | 0.5%  | 0         | 2.5%         | 1.0%  | 6         |
| <b>Plastics</b>                               |                         | <b>15.7%</b> |       | <b>31</b> | <b>31.0%</b> |       | <b>5</b>  | <b>4.7%</b>  |       | <b>1</b>  | <b>15.8%</b> |       | <b>38</b> |
| PET Bottles & Containers                      | Mixed Recyclable        | 0.7%         | 0.2%  | 1         | 4.6%         | 2.3%  | 1         | 0.2%         | 0.2%  | 0         | 1.0%         | 0.2%  | 2         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.3%         | 0.2%  | 1         | 1.5%         | 1.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.4%         | 0.2%  | 1         |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.8%         | 0.6%  | 2         | 5.3%         | 8.2%  | 1         | 0.0%         | 0.0%  | -         | 1.1%         | 0.8%  | 3         |
| Compostable Single-use Food Service Plastics  | Compostable             | 0.3%         | 0.1%  | 1         | 0.4%         | 0.3%  | 0         | 0.4%         | 0.1%  | 0         | 0.3%         | 0.1%  | 1         |
| Rigid Containers                              | Mixed Recyclable        | 0.9%         | 0.3%  | 2         | 9.7%         | 8.3%  | 2         | 0.2%         | 0.1%  | 0         | 1.5%         | 0.7%  | 4         |
| Expanded Polystyrene                          | Separated Recyclable    | 0.3%         | 0.3%  | 1         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.3%         | 0.2%  | 1         |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 0.6%         | 0.3%  | 1         | 0.5%         | 0.3%  | 0         | 0.1%         | 0.0%  | 0         | 0.6%         | 0.2%  | 1         |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.2%         | 0.1%  | 0         | 4.0%         | 1.9%  | 1         | 0.3%         | 0.2%  | 0         | 0.5%         | 0.1%  | 1         |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 0.9%         | 0.3%  | 2         | 1.7%         | 1.4%  | 0         | 0.2%         | 0.1%  | 0         | 0.9%         | 0.3%  | 2         |
| Compostable Bags                              | Compostable             | 0.3%         | 0.2%  | 1         | 0.3%         | 0.3%  | 0         | 2.8%         | 1.0%  | 1         | 0.5%         | 0.2%  | 1         |
| Latex/Nitrile Gloves                          | Non-recoverable         | 0.7%         | 0.2%  | 1         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.6%         | 0.2%  | 2         |
| Other Film                                    | Non-recoverable         | 4.6%         | 1.3%  | 9         | 0.8%         | 0.3%  | 0         | 0.1%         | 0.0%  | 0         | 3.9%         | 1.1%  | 9         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Plastic Products                        | Non-recoverable         | 2.7%         | 2.0%  | 5         | 1.3%         | 1.1%  | 0         | 0.0%         | 0.0%  | 0         | 2.4%         | 1.7%  | 6         |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 2.3%         | 2.2%  | 5         | 0.6%         | 0.6%  | 0         | 0.1%         | 0.1%  | 0         | 2.0%         | 1.9%  | 5         |
| <b>Glass</b>                                  |                         | <b>2.0%</b>  |       | <b>4</b>  | <b>6.9%</b>  |       | <b>1</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>2.2%</b>  |       | <b>5</b>  |
| Beverage Glass                                | Mixed Recyclable        | 0.4%         | 0.3%  | 1         | 5.5%         | 3.9%  | 1         | 0.0%         | 0.0%  | -         | 0.8%         | 0.4%  | 2         |
| Container Glass                               | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.2%         | 0.1%  | 0         |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Lab Glass                                     | Non-recoverable         | 0.5%         | 0.7%  | 1         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.4%         | 0.6%  | 1         |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.8%         | 1.3%  | 2         | 1.5%         | 2.4%  | 0         | 0.0%         | 0.0%  | -         | 0.8%         | 1.1%  | 2         |
| <b>Metals</b>                                 |                         | <b>3.4%</b>  |       | <b>7</b>  | <b>6.3%</b>  |       | <b>1</b>  | <b>0.3%</b>  |       | <b>0</b>  | <b>3.3%</b>  |       | <b>8</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.3%         | 0.1%  | 1         | 3.3%         | 1.7%  | 1         | 0.0%         | 0.0%  | -         | 0.5%         | 0.2%  | 1         |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.0%  | 0         |
| Other Nonferrous                              | Mixed Recyclable        | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Tin Food Cans                                 | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 2.9%         | 1.6%  | 1         | 0.2%         | 0.2%  | 0         | 0.4%         | 0.2%  | 1         |
| Empty Aerosol Cans                            | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Other Ferrous                                 | Mixed Recyclable        | 0.7%         | 0.5%  | 1         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.6%         | 0.4%  | 1         |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Metal             | Non-recoverable         | 1.8%         | 1.1%  | 4         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 1.5%         | 0.9%  | 4         |
| <b>Organics</b>                               |                         | <b>15.4%</b> |       | <b>31</b> | <b>10.2%</b> |       | <b>2</b>  | <b>58.5%</b> |       | <b>13</b> | <b>19.1%</b> |       | <b>46</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Leaves/Grass/Prunings                         | Compostable             | 5.6%         | 4.0%  | 11        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 4.6%         | 3.3%  | 11        |
| Other Untreated Wood                          | Compostable             | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         | 0.2%         | 0.2%  | 0         |
| Food  | Compostable             | 9.5%         | 3.9%  | 19        | 10.2%        | 9.0%  | 2         | 49.2%        | 16.0% | 11        | 13.3%        | 3.6%  | 32        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.1%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 9.3%         | 13.4% | 2         | 1.0%         | 1.3%  | 2         |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-8. Detailed Composition: Maintenance Buildings (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |            | Recycling    |       |           | Compost      |       |           | Total        |       |            |
|----------------------------------|-----------------------------|--------------|-------|------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|------------|
|                                  |                             | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons  |
| <b>Other Materials</b>           |                             | <b>25.1%</b> |       | <b>50</b>  | <b>0.2%</b>  |       | <b>0</b>  | <b>0.6%</b>  |       | <b>0</b>  | <b>20.9%</b> |       | <b>50</b>  |
| Textiles                         | Separated Recyclable        | 5.2%         | 3.2%  | 10         | 0.2%         | 0.3%  | 0         | 0.3%         | 0.3%  | 0         | 4.4%         | 2.7%  | 11         |
| Mixed Textiles                   | Separated Recyclable        | 5.2%         | 3.3%  | 10         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 4.3%         | 2.8%  | 10         |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Disposable Diapers               | Non-recoverable             | 2.6%         | 1.5%  | 5          | 0.0%         | 0.0%  | -         | 0.3%         | 0.5%  | 0         | 2.2%         | 1.2%  | 5          |
| Animal Waste                     | Non-recoverable             | 0.2%         | 0.2%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.2%  | 0          |
| Rubber Products                  | Non-recoverable             | 6.0%         | 6.0%  | 12         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 5.0%         | 5.0%  | 12         |
| Tires                            | Separated Recyclable        | 0.4%         | 0.6%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.3%         | 0.5%  | 1          |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Furniture                        | Non-recoverable             | 1.6%         | 2.6%  | 3          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 1.4%         | 2.2%  | 3          |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Small Appliances                 | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Ceramics/Porcelain               | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Fines & Miscellaneous            | Non-recoverable             | 3.8%         | 2.5%  | 8          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 3.2%         | 2.0%  | 8          |
| <b>CDL Wastes</b>                |                             | <b>19.2%</b> |       | <b>39</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>16.0%</b> |       | <b>38</b>  |
| Dimension Lumber                 | Recoverable C&D             | 0.2%         | 0.2%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.2%         | 0.1%  | 0          |
| Clean Engineered Wood            | Non-recoverable             | 0.4%         | 0.3%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.3%         | 0.3%  | 1          |
| Treated Wood                     | Non-recoverable             | 0.0%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Contaminated wood                | Non-recoverable             | 0.3%         | 0.3%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.3%         | 0.2%  | 1          |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Demo Gypsum Scrap                | Non-recoverable             | 0.9%         | 1.4%  | 2          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.7%         | 1.2%  | 2          |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.8%         | 1.2%  | 2          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.6%         | 1.0%  | 2          |
| Rock                             | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Carpet & Padding                 | Non-recoverable             | 14.4%        | 8.9%  | 29         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 12.0%        | 7.4%  | 29         |
| Construction Debris              | Non-recoverable             | 2.2%         | 2.1%  | 4          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 1.8%         | 1.7%  | 4          |
| <b>Regulated Wastes</b>          |                             | <b>0.4%</b>  |       | <b>1</b>   | <b>0.0%</b>  |       | <b>-</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.3%</b>  |       | <b>1</b>   |
| Latex Paints                     | Non-recoverable             | 0.1%         | 0.2%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Adhesives/Glues                  | Non-recoverable             | 0.1%         | 0.2%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -          |
| Red Bag Medical Waste            | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0          |
| Other Chemical Waste             | Non-recoverable             | 0.2%         | 0.1%  | 0          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0          |
|                                  | <b>Mixed Recyclable</b>     | <b>13%</b>   |       | <b>26</b>  | <b>73%</b>   |       | <b>13</b> | <b>3%</b>    |       | <b>1</b>  | <b>16%</b>   |       | <b>40</b>  |
|                                  | <b>Compostable</b>          | <b>24%</b>   |       | <b>47</b>  | <b>14%</b>   |       | <b>2</b>  | <b>86%</b>   |       | <b>20</b> | <b>29%</b>   |       | <b>69</b>  |
|                                  | <b>Separated Recyclable</b> | <b>12%</b>   |       | <b>24</b>  | <b>8%</b>    |       | <b>1</b>  | <b>1%</b>    |       | <b>0</b>  | <b>11%</b>   |       | <b>26</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>1%</b>    |       | <b>2</b>   | <b>0%</b>    |       | <b>0</b>  | <b>0%</b>    |       | <b>0</b>  | <b>1%</b>    |       | <b>2</b>   |
|                                  | <b>Non-recoverable</b>      | <b>50%</b>   |       | <b>101</b> | <b>6%</b>    |       | <b>1</b>  | <b>11%</b>   |       | <b>2</b>  | <b>43%</b>   |       | <b>104</b> |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>201</b> | <b>100%</b>  |       | <b>18</b> | <b>100%</b>  |       | <b>23</b> | <b>100%</b>  |       | <b>241</b> |
| <b>Sample Count</b>              |                             |              |       |            |              |       |           |              |       |           |              |       |            |
|                                  |                             |              |       |            |              |       | 10        |              |       | 10        |              |       |            |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

WASTE CHARACTERIZATION STUDY  
APPENDIX B. DETAILED COMPOSITION RESULTS

Table B-9. Detailed Composition: Medical Center

| Material Class / Material Type                | Recoverability Category | Garbage      |       |            | Recycling    |       |           | Compost      |       |           | Total        |       |              |
|---|-------------------------|--------------|-------|------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|--------------|
|   |                         | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons    |
| <b>Paper</b>                                  |                         | <b>57.9%</b> |       | <b>884</b> | <b>52.2%</b> |       | <b>63</b> | <b>46.1%</b> |       | <b>80</b> | <b>56.4%</b> |       | <b>1,027</b> |
| Newspaper                                     | Mixed Recyclable        | 0.6%         | 0.6%  | 9          | 1.1%         | 0.4%  | 1         | 0.1%         | 0.1%  | 0         | 0.6%         | 0.5%  | 10           |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 1.9%         | 1.0%  | 29         | 14.6%        | 6.6%  | 18        | 0.2%         | 0.2%  | 0         | 2.6%         | 0.9%  | 47           |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | -          | 0.4%         | 0.6%  | 0         | 0.3%         | 0.2%  | 0         | 0.1%         | 0.0%  | 1            |
| High-grade Paper                              | Mixed Recyclable        | 1.5%         | 1.0%  | 23         | 7.0%         | 4.2%  | 8         | 0.2%         | 0.1%  | 0         | 1.8%         | 0.9%  | 32           |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 19.7%        | 2.6%  | 301        | 19.5%        | 6.5%  | 24        | 2.6%         | 1.1%  | 4         | 18.1%        | 2.2%  | 329          |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 0.7%         | 0.3%  | 11         | 0.9%         | 0.5%  | 1         | 1.5%         | 0.7%  | 3         | 0.8%         | 0.3%  | 14           |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.0%         | 0.1%  | 1          | 4.1%         | 2.6%  | 5         | 0.3%         | 0.1%  | 0         | 0.3%         | 0.2%  | 6            |
| Compostable/Soiled Paper                      | Compostable             | 21.0%        | 2.2%  | 320        | 4.2%         | 1.6%  | 5         | 40.6%        | 7.5%  | 70        | 21.7%        | 2.0%  | 396          |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -            |
| Non-recoverable & Composite Paper             | Non-recoverable         | 12.4%        | 2.7%  | 190        | 0.4%         | 0.2%  | 1         | 0.4%         | 0.5%  | 1         | 10.5%        | 2.3%  | 191          |
| <b>Plastics</b>                               |                         | <b>27.5%</b> |       | <b>421</b> | <b>31.6%</b> |       | <b>38</b> | <b>8.9%</b>  |       | <b>15</b> | <b>26.0%</b> |       | <b>475</b>   |
| PET Bottles & Containers                      | Mixed Recyclable        | 0.4%         | 0.2%  | 6          | 4.4%         | 1.1%  | 5         | 0.4%         | 0.1%  | 1         | 0.6%         | 0.2%  | 12           |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.0%         | 0.0%  | 0          | 3.1%         | 0.9%  | 4         | 0.2%         | 0.0%  | 0         | 0.2%         | 0.1%  | 4            |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.1%         | 0.1%  | 2          | 3.9%         | 2.0%  | 5         | 0.0%         | 0.0%  | 0         | 0.3%         | 0.2%  | 6            |
| Compostable Single-use Food Service Plastics  | Compostable             | 0.3%         | 0.2%  | 5          | 0.4%         | 0.3%  | 0         | 3.1%         | 0.9%  | 5         | 0.6%         | 0.2%  | 11           |
| Rigid Containers                              | Mixed Recyclable        | 0.7%         | 0.3%  | 10         | 3.4%         | 1.0%  | 4         | 0.7%         | 0.2%  | 1         | 0.8%         | 0.2%  | 15           |
| Expanded Polystyrene                          | Separated Recyclable    | 0.2%         | 0.1%  | 3          | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 3            |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 2.2%         | 0.5%  | 34         | 0.4%         | 0.2%  | 0         | 0.2%         | 0.1%  | 0         | 1.9%         | 0.4%  | 35           |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0            |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.0%         | 0.0%  | 0          | 0.3%         | 0.3%  | 0         | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | 1            |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 1.1%         | 0.3%  | 16         | 1.3%         | 0.7%  | 2         | 0.2%         | 0.1%  | 0         | 1.0%         | 0.3%  | 18           |
| Compostable Bags                              | Compostable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -         | 3.0%         | 0.9%  | 5         | 0.3%         | 0.1%  | 6            |
| Latex/Nitrile Gloves                          | Non-recoverable         | 1.7%         | 0.4%  | 26         | 0.3%         | 0.2%  | 0         | 0.3%         | 0.1%  | 1         | 1.5%         | 0.3%  | 27           |
| Other Film                                    | Non-recoverable         | 9.1%         | 1.1%  | 139        | 5.2%         | 1.8%  | 6         | 0.4%         | 0.1%  | 1         | 8.0%         | 0.9%  | 146          |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.6%         | 0.4%  | 9          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.5%         | 0.3%  | 9            |
| I.V. Bags & Tubing                            | Non-recoverable         | 1.4%         | 0.4%  | 22         | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 1.2%         | 0.3%  | 22           |
| Respiratory Hoses                             | Non-recoverable         | 1.0%         | 0.3%  | 16         | 1.6%         | 1.9%  | 2         | 0.0%         | 0.0%  | -         | 1.0%         | 0.3%  | 18           |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 3.1%         | 0.5%  | 47         | 0.3%         | 0.3%  | 0         | 0.0%         | 0.1%  | 0         | 2.6%         | 0.4%  | 48           |
| Other Plastic Products                        | Non-recoverable         | 2.1%         | 0.6%  | 31         | 6.0%         | 4.0%  | 7         | 0.1%         | 0.1%  | 0         | 2.1%         | 0.6%  | 39           |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 3.6%         | 1.6%  | 56         | 0.8%         | 0.6%  | 1         | 0.2%         | 0.2%  | 0         | 3.1%         | 1.3%  | 57           |
| <b>Glass</b>                                  |                         | <b>2.6%</b>  |       | <b>40</b>  | <b>8.5%</b>  |       | <b>10</b> | <b>0.1%</b>  |       | <b>0</b>  | <b>2.8%</b>  |       | <b>50</b>    |
| Beverage Glass                                | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 8.3%         | 5.5%  | 10        | 0.0%         | 0.0%  | 0         | 0.6%         | 0.4%  | 10           |
| Container Glass                               | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0         | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0            |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0            |
| Lab Glass                                     | Non-recoverable         | 2.6%         | 2.7%  | 40         | 0.1%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 2.2%         | 2.3%  | 40           |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -            |
| <b>Metals</b>                                 |                         | <b>0.4%</b>  |       | <b>6</b>   | <b>5.6%</b>  |       | <b>7</b>  | <b>0.2%</b>  |       | <b>0</b>  | <b>0.7%</b>  |       | <b>14</b>    |
| Aluminum Cans                                 | Mixed Recyclable        | 0.2%         | 0.1%  | 4          | 2.6%         | 0.7%  | 3         | 0.1%         | 0.1%  | 0         | 0.4%         | 0.1%  | 7            |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.0%         | 0.0%  | 0          | 0.3%         | 0.2%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 1            |
| Other Nonferrous                              | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -            |
| Tin Food Cans                                 | Mixed Recyclable        | 0.0%         | 0.0%  | 0          | 2.6%         | 1.3%  | 3         | 0.0%         | 0.0%  | 0         | 0.2%         | 0.1%  | 3            |
| Empty Aerosol Cans                            | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -            |
| Other Ferrous                                 | Mixed Recyclable        | 0.1%         | 0.2%  | 2          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 2            |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -            |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.1%         | 0.1%  | 1          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 1            |
| <b>Organics</b>                               |                         | <b>7.6%</b>  |       | <b>115</b> | <b>1.5%</b>  |       | <b>2</b>  | <b>43.9%</b> |       | <b>76</b> | <b>10.6%</b> |       | <b>193</b>   |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -            |
| Leaves/Grass/Prunings                         | Compostable             | 0.1%         | 0.1%  | 1          | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.1%  | 1            |
| Other Untreated Wood                          | Compostable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | 0            |
| Food  | Compostable             | 7.5%         | 3.8%  | 114        | 1.5%         | 0.5%  | 2         | 43.8%        | 8.8%  | 76        | 10.5%        | 3.3%  | 192          |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0            |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-9. Detailed Composition: Medical Center (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |              | Recycling    |       |            | Compost      |       |            | Total        |       |              |
|----------------------------------|-----------------------------|--------------|-------|--------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|--------------|
|                                  |                             | Est. Percent | + / - | Est. Tons    | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons    |
| <b>Other Materials</b>           |                             | <b>2.6%</b>  |       | <b>40</b>    | <b>0.4%</b>  |       | <b>1</b>   | <b>0.3%</b>  |       | <b>0</b>   | <b>2.3%</b>  |       | <b>41</b>    |
| Textiles                         | Separated Recyclable        | 1.6%         | 0.8%  | 24           | 0.0%         | 0.0%  | 0          | 0.1%         | 0.0%  | 0          | 1.3%         | 0.7%  | 24           |
| Mixed Textiles                   | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | 0            |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Disposable Diapers               | Non-recoverable             | 1.1%         | 1.6%  | 16           | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 0          | 0.9%         | 1.4%  | 16           |
| Animal Waste                     | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Rubber Products                  | Non-recoverable             | 0.0%         | 0.0%  | 0            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Small Appliances                 | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Ceramics/Porcelain               | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Fines & Miscellaneous            | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.4%         | 0.6%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| <b>CDL Wastes</b>                |                             | <b>1.0%</b>  |       | <b>15</b>    | <b>0.0%</b>  |       | <b>-</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.8%</b>  |       | <b>15</b>    |
| Dimension Lumber                 | Recoverable C&D             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Treated Wood                     | Non-recoverable             | 0.2%         | 0.2%  | 2            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.2%  | 2            |
| Contaminated wood                | Non-recoverable             | 0.1%         | 0.2%  | 2            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.2%  | 2            |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Carpet & Padding                 | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Construction Debris              | Non-recoverable             | 0.7%         | 1.1%  | 10           | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.6%         | 0.9%  | 10           |
| <b>Regulated Wastes</b>          |                             | <b>0.4%</b>  |       | <b>6</b>     | <b>0.2%</b>  |       | <b>0</b>   | <b>0.6%</b>  |       | <b>1</b>   | <b>0.4%</b>  |       | <b>7</b>     |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.4%         | 0.4%  | 6            | 0.0%         | 0.0%  | -          | 0.5%         | 0.5%  | 1          | 0.4%         | 0.4%  | 7            |
| Red Bag Medical Waste            | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Other Chemical Waste             | Non-recoverable             | 0.0%         | 0.0%  | -            | 0.2%         | 0.3%  | 0          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0            |
|                                  | <b>Mixed Recyclable</b>     | <b>26%</b>   |       | <b>397</b>   | <b>76%</b>   |       | <b>92</b>  | <b>6%</b>    |       | <b>11</b>  | <b>27%</b>   |       | <b>500</b>   |
|                                  | <b>Compostable</b>          | <b>29%</b>   |       | <b>441</b>   | <b>7%</b>    |       | <b>8</b>   | <b>91%</b>   |       | <b>157</b> | <b>33%</b>   |       | <b>606</b>   |
|                                  | <b>Separated Recyclable</b> | <b>3%</b>    |       | <b>43</b>    | <b>2%</b>    |       | <b>2</b>   | <b>0%</b>    |       | <b>1</b>   | <b>3%</b>    |       | <b>46</b>    |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>0</b>     | <b>0%</b>    |       | <b>0</b>   | <b>0%</b>    |       | <b>0</b>   | <b>0%</b>    |       | <b>0</b>     |
|                                  | <b>Non-recoverable</b>      | <b>42%</b>   |       | <b>647</b>   | <b>16%</b>   |       | <b>19</b>  | <b>2%</b>    |       | <b>4</b>   | <b>37%</b>   |       | <b>670</b>   |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>1,528</b> | <b>100%</b>  |       | <b>121</b> | <b>100%</b>  |       | <b>173</b> | <b>100%</b>  |       | <b>1,822</b> |
| <b>Sample Count</b>              |                             |              |       | <b>25</b>    |              |       | <b>10</b>  |              |       | <b>14</b>  |              |       |              |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-10. Detailed Composition: Residence Halls

| Material Class / Material Type                | Recoverability Category | Garbage      |       |            | Recycling    |       |            | Compost      |       |            | Total        |       |            |
|---|-------------------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|------------|
|   |                         | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  |
| <b>Paper</b>                                  |                         | <b>35.5%</b> |       | <b>229</b> | <b>64.2%</b> |       | <b>181</b> | <b>33.0%</b> |       | <b>96</b>  | <b>41.5%</b> |       | <b>506</b> |
| Newspaper                                     | Mixed Recyclable        | 0.2%         | 0.1%  | 2          | 1.2%         | 0.5%  | 3          | 0.0%         | 0.0%  | 0          | 0.4%         | 0.1%  | 5          |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 3.8%         | 0.7%  | 25         | 38.9%        | 11.7% | 110        | 0.2%         | 0.3%  | 1          | 11.1%        | 2.7%  | 135        |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.1%         | 0.1%  | 1          | 0.3%         | 0.4%  | 1          | 0.4%         | 0.5%  | 1          | 0.2%         | 0.2%  | 3          |
| High-grade Paper                              | Mixed Recyclable        | 0.3%         | 0.1%  | 2          | 3.5%         | 2.1%  | 10         | 0.0%         | 0.0%  | 0          | 0.9%         | 0.5%  | 12         |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 9.3%         | 1.3%  | 60         | 10.2%        | 3.1%  | 29         | 1.0%         | 0.6%  | 3          | 7.5%         | 1.0%  | 91         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 0.2%         | 0.1%  | 1          | 0.4%         | 0.2%  | 1          | 0.4%         | 0.3%  | 1          | 0.3%         | 0.1%  | 3          |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.6%         | 0.1%  | 4          | 1.6%         | 0.4%  | 4          | 0.0%         | 0.0%  | 0          | 0.7%         | 0.1%  | 9          |
| Compostable/Soiled Paper                      | Compostable             | 19.7%        | 1.5%  | 127        | 7.6%         | 2.2%  | 22         | 30.8%        | 11.5% | 90         | 19.5%        | 2.9%  | 238        |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Paper             | Non-recoverable         | 1.4%         | 0.4%  | 9          | 0.6%         | 0.5%  | 2          | 0.1%         | 0.0%  | 0          | 0.9%         | 0.2%  | 11         |
| <b>Plastics</b>                               |                         | <b>23.0%</b> |       | <b>148</b> | <b>16.0%</b> |       | <b>45</b>  | <b>5.5%</b>  |       | <b>16</b>  | <b>17.2%</b> |       | <b>209</b> |
| PET Bottles & Containers                      | Mixed Recyclable        | 2.3%         | 0.2%  | 15         | 5.3%         | 1.4%  | 15         | 0.3%         | 0.1%  | 1          | 2.5%         | 0.4%  | 30         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.5%         | 0.1%  | 3          | 2.2%         | 0.9%  | 6          | 0.0%         | 0.0%  | 0          | 0.8%         | 0.2%  | 9          |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.5%         | 0.1%  | 3          | 0.3%         | 0.1%  | 1          | 0.0%         | 0.0%  | 0          | 0.3%         | 0.1%  | 4          |
| Compostable Single-use Food Service Plastics  | Compostable             | 1.2%         | 0.2%  | 8          | 0.8%         | 0.4%  | 2          | 2.4%         | 1.3%  | 7          | 1.4%         | 0.3%  | 17         |
| Rigid Containers                              | Mixed Recyclable        | 3.3%         | 0.5%  | 22         | 1.6%         | 0.5%  | 4          | 0.4%         | 0.1%  | 1          | 2.2%         | 0.3%  | 27         |
| Expanded Polystyrene                          | Separated Recyclable    | 0.1%         | 0.1%  | 1          | 0.1%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.0%  | 1          |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 0.8%         | 0.3%  | 5          | 0.1%         | 0.1%  | 0          | 0.1%         | 0.0%  | 0          | 0.5%         | 0.2%  | 6          |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.5%         | 0.1%  | 3          | 0.1%         | 0.1%  | 0          | 0.1%         | 0.1%  | 0          | 0.3%         | 0.1%  | 4          |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 1.7%         | 0.5%  | 11         | 0.6%         | 0.4%  | 2          | 0.1%         | 0.1%  | 0          | 1.1%         | 0.3%  | 13         |
| Compostable Bags                              | Compostable             | 0.3%         | 0.1%  | 2          | 0.0%         | 0.0%  | 0          | 1.7%         | 0.6%  | 5          | 0.6%         | 0.2%  | 7          |
| Latex/Nitrile Gloves                          | Non-recoverable         | 1.6%         | 0.6%  | 10         | 0.8%         | 0.6%  | 2          | 0.1%         | 0.0%  | 0          | 1.0%         | 0.4%  | 13         |
| Other Film                                    | Non-recoverable         | 8.9%         | 0.9%  | 58         | 3.0%         | 0.9%  | 9          | 0.2%         | 0.1%  | 1          | 5.5%         | 0.5%  | 67         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Other Plastic Products                        | Non-recoverable         | 0.7%         | 0.3%  | 4          | 0.6%         | 0.6%  | 2          | 0.0%         | 0.0%  | 0          | 0.5%         | 0.2%  | 6          |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.7%         | 0.2%  | 4          | 0.4%         | 0.2%  | 1          | 0.1%         | 0.0%  | 0          | 0.5%         | 0.1%  | 6          |
| <b>Glass</b>                                  |                         | <b>2.5%</b>  |       | <b>16</b>  | <b>8.6%</b>  |       | <b>24</b>  | <b>0.1%</b>  |       | <b>0</b>   | <b>3.3%</b>  |       | <b>41</b>  |
| Beverage Glass                                | Mixed Recyclable        | 2.0%         | 0.5%  | 13         | 8.6%         | 2.2%  | 24         | 0.0%         | 0.1%  | 0          | 3.0%         | 0.6%  | 37         |
| Container Glass                               | Mixed Recyclable        | 0.5%         | 0.1%  | 3          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.1%  | 0          | 0.3%         | 0.1%  | 4          |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| Lab Glass                                     | Non-recoverable         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          |
| <b>Metals</b>                                 |                         | <b>1.4%</b>  |       | <b>9</b>   | <b>4.4%</b>  |       | <b>12</b>  | <b>0.1%</b>  |       | <b>0</b>   | <b>1.8%</b>  |       | <b>22</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.3%         | 0.1%  | 2          | 0.7%         | 0.3%  | 2          | 0.0%         | 0.0%  | 0          | 0.3%         | 0.1%  | 4          |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.4%         | 0.1%  | 2          | 0.2%         | 0.2%  | 0          | 0.0%         | 0.0%  | 0          | 0.2%         | 0.1%  | 3          |
| Other Nonferrous                              | Mixed Recyclable        | 0.0%         | 0.0%  | 0          | 0.7%         | 1.0%  | 2          | 0.0%         | 0.0%  | 0          | 0.2%         | 0.2%  | 2          |
| Tin Food Cans                                 | Mixed Recyclable        | 0.3%         | 0.1%  | 2          | 1.5%         | 0.9%  | 4          | 0.0%         | 0.0%  | -          | 0.5%         | 0.2%  | 6          |
| Empty Aerosol Cans                            | Non-recoverable         | 0.2%         | 0.1%  | 1          | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1          |
| Other Ferrous                                 | Mixed Recyclable        | 0.1%         | 0.0%  | 0          | 1.3%         | 1.8%  | 4          | 0.0%         | 0.0%  | 0          | 0.3%         | 0.4%  | 4          |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.2%         | 0.1%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.1%  | 1          |
| <b>Organics</b>                               |                         | <b>30.2%</b> |       | <b>195</b> | <b>5.8%</b>  |       | <b>16</b>  | <b>61.1%</b> |       | <b>178</b> | <b>32.0%</b> |       | <b>390</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          |
| Leaves/Grass/Prunings                         | Compostable             | 0.2%         | 0.2%  | 1          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.1%  | 0          | 0.1%         | 0.1%  | 1          |
| Other Untreated Wood                          | Compostable             | 0.1%         | 0.0%  | 1          | 0.0%         | 0.0%  | 0          | 0.1%         | 0.0%  | 0          | 0.1%         | 0.0%  | 1          |
| Food  | Compostable             | 28.5%        | 3.1%  | 184        | 5.7%         | 2.1%  | 16         | 61.0%        | 12.1% | 178        | 31.0%        | 3.4%  | 378        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 1.4%         | 2.3%  | 9          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.8%         | 1.2%  | 9          |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-10. Detailed Composition: Residence Halls (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |            | Recycling    |       |            | Compost      |       |            | Total        |       |              |
|----------------------------------|-----------------------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|------------|--------------|-------|--------------|
|                                  |                             | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons  | Est. Percent | + / - | Est. Tons    |
| <b>Other Materials</b>           |                             | <b>6.9%</b>  |       | <b>44</b>  | <b>1.0%</b>  |       | <b>3</b>   | <b>0.2%</b>  |       | <b>1</b>   | <b>3.9%</b>  |       | <b>48</b>    |
| Textiles                         | Separated Recyclable        | 1.2%         | 0.4%  | 8          | 0.2%         | 0.1%  | 0          | 0.1%         | 0.0%  | 0          | 0.7%         | 0.2%  | 8            |
| Mixed Textiles                   | Separated Recyclable        | 0.4%         | 0.2%  | 3          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.2%         | 0.1%  | 3            |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Disposable Diapers               | Non-recoverable             | 3.3%         | 1.2%  | 21         | 0.1%         | 0.1%  | 0          | 0.1%         | 0.1%  | 0          | 1.8%         | 0.6%  | 22           |
| Animal Waste                     | Non-recoverable             | 0.4%         | 0.4%  | 3          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.2%         | 0.2%  | 3            |
| Rubber Products                  | Non-recoverable             | 0.1%         | 0.1%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1            |
| Tires                            | Separated Recyclable        | 0.1%         | 0.2%  | 1          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.1%  | 1            |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Small Appliances                 | Separated Recyclable        | 0.3%         | 0.4%  | 2          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.1%         | 0.2%  | 2            |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Ceramics/Porcelain               | Non-recoverable             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Fines & Miscellaneous            | Non-recoverable             | 1.0%         | 0.2%  | 6          | 0.7%         | 0.3%  | 2          | 0.0%         | 0.0%  | 0          | 0.7%         | 0.1%  | 8            |
| <b>CDL Wastes</b>                |                             | <b>0.1%</b>  |       | <b>1</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.0%</b>  |       | <b>1</b>     |
| Dimension Lumber                 | Recoverable C&D             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Treated Wood                     | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Asphaltic Roofing                | Recoverable C&D             | 0.1%         | 0.1%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.1%  | 0            |
| Carpet & Padding                 | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Construction Debris              | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| <b>Regulated Wastes</b>          |                             | <b>0.4%</b>  |       | <b>2</b>   | <b>0.1%</b>  |       | <b>0</b>   | <b>0.0%</b>  |       | <b>-</b>   | <b>0.2%</b>  |       | <b>2</b>     |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -            |
| Red Bag Medical Waste            | Non-recoverable             | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | -          | 0.0%         | 0.0%  | 0            |
| Other Chemical Waste             | Non-recoverable             | 0.4%         | 0.2%  | 2          | 0.0%         | 0.0%  | 0          | 0.0%         | 0.0%  | -          | 0.2%         | 0.1%  | 2            |
|                                  | <b>Mixed Recyclable</b>     | <b>25%</b>   |       | <b>158</b> | <b>78%</b>   |       | <b>220</b> | <b>3%</b>    |       | <b>8</b>   | <b>32%</b>   |       | <b>385</b>   |
|                                  | <b>Compostable</b>          | <b>50%</b>   |       | <b>323</b> | <b>15%</b>   |       | <b>41</b>  | <b>96%</b>   |       | <b>281</b> | <b>53%</b>   |       | <b>646</b>   |
|                                  | <b>Separated Recyclable</b> | <b>4%</b>    |       | <b>27</b>  | <b>1%</b>    |       | <b>3</b>   | <b>0%</b>    |       | <b>1</b>   | <b>3%</b>    |       | <b>31</b>    |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>0</b>     |
|                                  | <b>Non-recoverable</b>      | <b>21%</b>   |       | <b>136</b> | <b>6%</b>    |       | <b>18</b>  | <b>1%</b>    |       | <b>2</b>   | <b>13%</b>   |       | <b>156</b>   |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>645</b> | <b>100%</b>  |       | <b>282</b> | <b>100%</b>  |       | <b>292</b> | <b>100%</b>  |       | <b>1,219</b> |
| <b>Sample Count</b>              |                             |              |       | <b>25</b>  |              |       | <b>15</b>  |              |       | <b>14</b>  |              |       |              |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-11. Detailed Composition: Outdoor Litter Receptacles: Bigbelly Stations

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Compost      |       |           | Total        |       |           |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons |
| <b>Paper</b>                                  |                         | <b>30.1%</b> |       | <b>7</b>  | <b>26.2%</b> |       | <b>2</b>  | <b>30.5%</b> |       | <b>5</b>  | <b>29.5%</b> |       | <b>14</b> |
| Newspaper                                     | Mixed Recyclable        | 0.7%         | 0.4%  | 0         | 2.2%         | 1.0%  | 0         | 0.0%         | 0.0%  | 0         | 0.8%         | 0.3%  | 0         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 2.6%         | 0.4%  | 1         | 0.6%         | 0.3%  | 0         | 0.0%         | 0.0%  | 0         | 1.4%         | 0.2%  | 1         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | -         | 0.2%         | 0.1%  | 0         | 0.1%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0         |
| High-grade Paper                              | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 1.9%         | 1.2%  | 0         | 0.2%         | 0.2%  | 0         | 0.5%         | 0.2%  | 0         |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 4.2%         | 0.6%  | 1         | 6.2%         | 2.5%  | 1         | 0.8%         | 0.7%  | 0         | 3.4%         | 0.6%  | 2         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 4.0%         | 0.4%  | 1         | 3.7%         | 1.3%  | 0         | 2.9%         | 0.8%  | 0         | 3.6%         | 0.4%  | 2         |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.5%         | 0.1%  | 0         | 1.4%         | 0.5%  | 0         | 1.0%         | 1.2%  | 0         | 0.8%         | 0.4%  | 0         |
| Compostable/Soiled Paper                      | Compostable             | 15.8%        | 2.4%  | 3         | 9.4%         | 1.6%  | 1         | 25.2%        | 2.7%  | 4         | 17.8%        | 1.5%  | 8         |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Paper             | Non-recoverable         | 2.2%         | 1.4%  | 0         | 0.6%         | 0.2%  | 0         | 0.2%         | 0.1%  | 0         | 1.2%         | 0.7%  | 1         |
| <b>Plastics</b>                               |                         | <b>24.1%</b> |       | <b>5</b>  | <b>36.0%</b> |       | <b>3</b>  | <b>9.5%</b>  |       | <b>1</b>  | <b>21.5%</b> |       | <b>10</b> |
| PET Bottles & Containers                      | Mixed Recyclable        | 1.0%         | 0.2%  | 0         | 15.3%        | 1.9%  | 1         | 0.4%         | 0.1%  | 0         | 3.5%         | 0.4%  | 2         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 1.2%         | 0.4%  | 0         | 0.0%         | 0.0%  | -         | 0.3%         | 0.1%  | 0         |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.4%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Compostable Single-use Food Service Plastics  | Compostable             | 3.2%         | 0.3%  | 1         | 5.2%         | 1.4%  | 0         | 5.4%         | 0.7%  | 1         | 4.3%         | 0.4%  | 2         |
| Rigid Containers                              | Mixed Recyclable        | 4.3%         | 0.8%  | 1         | 4.7%         | 0.9%  | 0         | 1.2%         | 0.4%  | 0         | 3.3%         | 0.4%  | 2         |
| Expanded Polystyrene                          | Separated Recyclable    | 0.0%         | 0.0%  | 0         | 0.0%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 1.6%         | 0.3%  | 0         | 0.5%         | 0.1%  | 0         | 0.2%         | 0.0%  | 0         | 0.9%         | 0.1%  | 0         |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -         | 1.0%         | 1.5%  | 0         | 0.0%         | 0.0%  | -         | 0.2%         | 0.3%  | 0         |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.6%         | 0.2%  | 0         | 6.1%         | 1.3%  | 1         | 0.1%         | 0.2%  | 0         | 1.5%         | 0.3%  | 1         |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 0.5%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.3%         | 0.1%  | 0         |
| Compostable Bags                              | Compostable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 1.7%         | 0.9%  | 0         | 0.6%         | 0.3%  | 0         |
| Latex/Nitrile Gloves                          | Non-recoverable         | 0.3%         | 0.1%  | 0         | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.0%  | 0         |
| Other Film                                    | Non-recoverable         | 11.5%        | 1.6%  | 3         | 1.1%         | 0.1%  | 0         | 0.4%         | 0.1%  | 0         | 5.8%         | 0.8%  | 3         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Plastic Products                        | Non-recoverable         | 0.2%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.7%         | 0.6%  | 0         | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | 0         | 0.4%         | 0.3%  | 0         |
| <b>Glass</b>                                  |                         | <b>1.0%</b>  |       | <b>0</b>  | <b>15.8%</b> |       | <b>1</b>  | <b>0.1%</b>  |       | <b>0</b>  | <b>3.5%</b>  |       | <b>2</b>  |
| Beverage Glass                                | Mixed Recyclable        | 0.8%         | 0.2%  | 0         | 15.8%        | 2.2%  | 1         | 0.1%         | 0.1%  | 0         | 3.4%         | 0.4%  | 2         |
| Container Glass                               | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Lab Glass                                     | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 0         |
| <b>Metals</b>                                 |                         | <b>2.1%</b>  |       | <b>0</b>  | <b>7.7%</b>  |       | <b>1</b>  | <b>0.2%</b>  |       | <b>0</b>  | <b>2.5%</b>  |       | <b>1</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.3%         | 0.2%  | 0         | 6.7%         | 1.4%  | 1         | 0.1%         | 0.1%  | 0         | 1.5%         | 0.3%  | 1         |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.3%         | 0.1%  | 0         | 0.4%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0         | 0.3%         | 0.1%  | 0         |
| Other Nonferrous                              | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Tin Food Cans                                 | Mixed Recyclable        | 0.1%         | 0.0%  | 0         | 0.6%         | 0.4%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Empty Aerosol Cans                            | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Ferrous                                 | Mixed Recyclable        | 0.1%         | 0.1%  | 0         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.0%  | 0         |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Metal             | Non-recoverable         | 1.1%         | 0.5%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.5%         | 0.2%  | 0         |
| <b>Organics</b>                               |                         | <b>29.9%</b> |       | <b>7</b>  | <b>13.6%</b> |       | <b>1</b>  | <b>59.7%</b> |       | <b>9</b>  | <b>36.8%</b> |       | <b>17</b> |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Leaves/Grass/Prunings                         | Compostable             | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         |
| Other Untreated Wood                          | Compostable             | 0.2%         | 0.1%  | 0         | 0.1%         | 0.0%  | 0         | 0.1%         | 0.0%  | 0         | 0.1%         | 0.0%  | 0         |
| Food  | Compostable             | 29.4%        | 3.3%  | 6         | 13.5%        | 4.9%  | 1         | 59.5%        | 4.0%  | 9         | 36.5%        | 2.3%  | 17        |
| Non-recoverable & Composite Organics          | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-11. Detailed Composition: Outdoor Litter Receptacles: Bigbelly Stations (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |           | Recycling    |       |           | Compost      |       |           | Total        |       |           |
|----------------------------------|-----------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|
|                                  |                             | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons |
| <b>Other Materials</b>           |                             | <b>12.5%</b> |       | <b>3</b>  | <b>0.7%</b>  |       | <b>0</b>  | <b>0.0%</b>  |       | <b>0</b>  | <b>6.1%</b>  |       | <b>3</b>  |
| Textiles                         | Separated Recyclable        | 1.6%         | 1.4%  | 0         | 0.4%         | 0.6%  | 0         | 0.0%         | 0.0%  | 0         | 0.9%         | 0.7%  | 0         |
| Mixed Textiles                   | Separated Recyclable        | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Leather                          | Non-recoverable             | 0.3%         | 0.4%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.2%  | 0         |
| Disposable Diapers               | Non-recoverable             | 1.6%         | 1.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.7%         | 0.5%  | 0         |
| Animal Waste                     | Non-recoverable             | 8.0%         | 2.9%  | 2         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 3.8%         | 1.4%  | 2         |
| Rubber Products                  | Non-recoverable             | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Small Appliances                 | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 0         |
| Ceramics/Porcelain               | Non-recoverable             | 0.2%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Fines & Miscellaneous            | Non-recoverable             | 0.6%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.3%         | 0.1%  | 0         |
| <b>CDL Wastes</b>                |                             | <b>0.0%</b>  |       | <b>0</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.0%</b>  |       | <b>0</b>  |
| Dimension Lumber                 | Recoverable C&D             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Treated Wood                     | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Carpet & Padding                 | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Construction Debris              | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| <b>Regulated Wastes</b>          |                             | <b>0.2%</b>  |       | <b>0</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.1%</b>  |       | <b>0</b>  |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Red Bag Medical Waste            | Non-recoverable             | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Chemical Waste             | Non-recoverable             | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
|                                  | <b>Mixed Recyclable</b>     | <b>20%</b>   |       | <b>4</b>  | <b>62%</b>   |       | <b>5</b>  | <b>7%</b>    |       | <b>1</b>  | <b>23%</b>   |       | <b>11</b> |
|                                  | <b>Compostable</b>          | <b>49%</b>   |       | <b>11</b> | <b>28%</b>   |       | <b>2</b>  | <b>92%</b>   |       | <b>14</b> | <b>59%</b>   |       | <b>27</b> |
|                                  | <b>Separated Recyclable</b> | <b>3%</b>    |       | <b>1</b>  | <b>7%</b>    |       | <b>1</b>  | <b>0%</b>    |       | <b>0</b>  | <b>3%</b>    |       | <b>1</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>0</b>  |
|                                  | <b>Non-recoverable</b>      | <b>29%</b>   |       | <b>6</b>  | <b>3%</b>    |       | <b>0</b>  | <b>1%</b>    |       | <b>0</b>  | <b>14%</b>   |       | <b>7</b>  |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>22</b> | <b>100%</b>  |       | <b>9</b>  | <b>100%</b>  |       | <b>15</b> | <b>100%</b>  |       | <b>46</b> |
| <b>Sample Count</b>              |                             |              |       | <b>13</b> |              |       | <b>10</b> |              |       | <b>10</b> |              |       | <b>46</b> |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-12. Detailed Composition: Outdoor Litter Receptacles: Smart Cans

| Material Class / Material Type                | Recoverability Category | Garbage      |       |           | Recycling    |       |           | Total        |       |           |
|---|-------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|
|   |                         | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons |
| <b>Paper</b>                                  |                         | <b>28.2%</b> |       | <b>6</b>  | <b>13.3%</b> |       | <b>0</b>  | <b>27.6%</b> |       | <b>6</b>  |
| Newspaper                                     | Mixed Recyclable        | 1.5%         | 0.8%  | 0         | 0.2%         | 0.4%  | 0         | 1.5%         | 0.8%  | 0         |
| Plain OCC/Kraft Paper                         | Mixed Recyclable        | 2.9%         | 0.4%  | 1         | 0.0%         | 0.0%  | -         | 2.8%         | 0.3%  | 1         |
| Waxed OCC/Kraft Paper                         | Compostable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| High-grade Paper                              | Mixed Recyclable        | 0.4%         | 0.4%  | 0         | 0.4%         | 0.2%  | 0         | 0.4%         | 0.4%  | 0         |
| Mixed Low-grade Paper                         | Mixed Recyclable        | 4.5%         | 0.8%  | 1         | 2.9%         | 2.0%  | 0         | 4.5%         | 0.8%  | 1         |
| Non-compostable Single-use Food Service Paper | Mixed Recyclable        | 4.1%         | 0.9%  | 1         | 4.7%         | 2.0%  | 0         | 4.1%         | 0.8%  | 1         |
| Polycoated/Aseptic Packaging                  | Mixed Recyclable        | 0.5%         | 0.2%  | 0         | 1.1%         | 0.6%  | 0         | 0.5%         | 0.2%  | 0         |
| Compostable/Soiled Paper                      | Compostable             | 13.2%        | 3.3%  | 3         | 3.7%         | 1.2%  | 0         | 12.8%        | 3.1%  | 3         |
| Hardcover Books                               | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Paper             | Non-recoverable         | 1.1%         | 0.3%  | 0         | 0.2%         | 0.1%  | 0         | 1.1%         | 0.3%  | 0         |
| <b>Plastics</b>                               |                         | <b>18.2%</b> |       | <b>4</b>  | <b>32.4%</b> |       | <b>0</b>  | <b>18.7%</b> |       | <b>4</b>  |
| PET Bottles & Containers                      | Mixed Recyclable        | 1.3%         | 0.3%  | 0         | 22.3%        | 5.6%  | 0         | 2.2%         | 0.4%  | 1         |
| HDPE Natural Bottles & Tubs                   | Mixed Recyclable        | 0.1%         | 0.0%  | 0         | 2.0%         | 1.6%  | 0         | 0.1%         | 0.1%  | 0         |
| HDPE Colored Bottles & Tubs                   | Mixed Recyclable        | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.0%  | 0         |
| Compostable Single-use Food Service Plastics  | Compostable             | 1.9%         | 0.5%  | 0         | 1.6%         | 0.4%  | 0         | 1.9%         | 0.5%  | 0         |
| Rigid Containers                              | Mixed Recyclable        | 2.3%         | 0.4%  | 1         | 4.8%         | 0.9%  | 0         | 2.4%         | 0.4%  | 1         |
| Expanded Polystyrene                          | Separated Recyclable    | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Non-recoverable Rigid Packaging               | Non-recoverable         | 1.3%         | 0.2%  | 0         | 0.5%         | 0.3%  | 0         | 1.3%         | 0.2%  | 0         |
| Bagged Clean Shopping/Dry Cleaner Bags        | Mixed Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Loose Clean Shopping/Dry Cleaner Bags         | Separated Recyclable    | 0.4%         | 0.1%  | 0         | 0.6%         | 0.8%  | 0         | 0.4%         | 0.1%  | 0         |
| Other Clean Polyethylene Film                 | Separated Recyclable    | 0.5%         | 0.3%  | 0         | 0.1%         | 0.1%  | 0         | 0.5%         | 0.3%  | 0         |
| Compostable Bags                              | Compostable             | 0.3%         | 0.2%  | 0         | 0.2%         | 0.3%  | 0         | 0.3%         | 0.2%  | 0         |
| Latex/Nitrile Gloves                          | Non-recoverable         | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.2%         | 0.1%  | 0         |
| Other Film                                    | Non-recoverable         | 8.9%         | 1.6%  | 2         | 0.1%         | 0.1%  | 0         | 8.6%         | 1.5%  | 2         |
| Bed Pans/Basins/Trays                         | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| I.V. Bags & Tubing                            | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Respiratory Hoses                             | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Draping/Sterile Wrap/Gowns                    | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Plastic Products                        | Non-recoverable         | 0.4%         | 0.2%  | 0         | 0.1%         | 0.1%  | 0         | 0.3%         | 0.2%  | 0         |
| Non-recoverable & Composite Plastic           | Non-recoverable         | 0.4%         | 0.3%  | 0         | 0.1%         | 0.1%  | 0         | 0.4%         | 0.3%  | 0         |
| <b>Glass</b>                                  |                         | <b>3.6%</b>  |       | <b>1</b>  | <b>33.9%</b> |       | <b>0</b>  | <b>4.8%</b>  |       | <b>1</b>  |
| Beverage Glass                                | Mixed Recyclable        | 3.0%         | 0.7%  | 1         | 33.9%        | 9.0%  | 0         | 4.3%         | 0.7%  | 1         |
| Container Glass                               | Mixed Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Light Bulbs & Tubes                           | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Lab Glass                                     | Non-recoverable         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Glass             | Non-recoverable         | 0.5%         | 0.5%  | 0         | 0.0%         | 0.0%  | -         | 0.5%         | 0.5%  | 0         |
| <b>Metals</b>                                 |                         | <b>1.2%</b>  |       | <b>0</b>  | <b>12.9%</b> |       | <b>0</b>  | <b>1.7%</b>  |       | <b>0</b>  |
| Aluminum Cans                                 | Mixed Recyclable        | 0.7%         | 0.2%  | 0         | 12.3%        | 3.0%  | 0         | 1.1%         | 0.2%  | 0         |
| Other Single-use Aluminum                     | Mixed Recyclable        | 0.1%         | 0.0%  | 0         | 0.2%         | 0.4%  | 0         | 0.1%         | 0.0%  | 0         |
| Other Nonferrous                              | Mixed Recyclable        | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Tin Food Cans                                 | Mixed Recyclable        | 0.2%         | 0.1%  | 0         | 0.3%         | 0.5%  | 0         | 0.2%         | 0.1%  | 0         |
| Empty Aerosol Cans                            | Non-recoverable         | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Other Ferrous                                 | Mixed Recyclable        | 0.2%         | 0.2%  | 0         | 0.0%         | 0.0%  | -         | 0.2%         | 0.2%  | 0         |
| Oil Filters                                   | Separated Recyclable    | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-recoverable & Composite Metal             | Non-recoverable         | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| <b>Organics</b>                               |                         | <b>23.3%</b> |       | <b>5</b>  | <b>7.5%</b>  |       | <b>0</b>  | <b>22.7%</b> |       | <b>5</b>  |
| Pallets & Crates                              | Recoverable C&D         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Leaves/Grass/Prunings                         | Compostable             | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | 0         | 0.1%         | 0.1%  | 0         |
| Other Untreated Wood                          | Compostable             | 0.1%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.0%  | 0         |
| Food  | Compostable             | 21.9%        | 4.4%  | 5         | 7.0%         | 6.3%  | 0         | 21.3%        | 4.2%  | 5         |
| Non-recoverable & Composite Organics          | Non-recoverable         | 1.2%         | 0.7%  | 0         | 0.4%         | 0.3%  | 0         | 1.2%         | 0.7%  | 0         |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table B-12. Detailed Composition: Outdoor Litter Receptacles: Smart Cans (continued)

| Material Class / Material Type   | Recoverability Category     | Garbage      |       |           | Recycling    |       |           | Total        |       |           |
|----------------------------------|-----------------------------|--------------|-------|-----------|--------------|-------|-----------|--------------|-------|-----------|
|                                  |                             | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons | Est. Percent | + / - | Est. Tons |
| <b>Other Materials</b>           |                             | <b>25.2%</b> |       | <b>6</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>24.2%</b> |       | <b>6</b>  |
| Textiles                         | Separated Recyclable        | 1.0%         | 0.5%  | 0         | 0.0%         | 0.0%  | -         | 0.9%         | 0.4%  | 0         |
| Mixed Textiles                   | Separated Recyclable        | 0.3%         | 0.4%  | 0         | 0.0%         | 0.0%  | -         | 0.3%         | 0.4%  | 0         |
| Leather                          | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Disposable Diapers               | Non-recoverable             | 0.4%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.4%         | 0.3%  | 0         |
| Animal Waste                     | Non-recoverable             | 22.7%        | 9.8%  | 5         | 0.0%         | 0.0%  | -         | 21.8%        | 9.4%  | 5         |
| Rubber Products                  | Non-recoverable             | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Tires                            | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Ash                              | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Furniture                        | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Mattresses                       | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Small Appliances                 | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Cell Phones & Tablets            | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| CRT Monitors/Televisions         | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Non-CRT Monitors/Televisions     | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Other Electronics                | Separated Recyclable        | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Ceramics/Porcelain               | Non-recoverable             | 0.1%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.1%         | 0.1%  | 0         |
| Fines & Miscellaneous            | Non-recoverable             | 0.6%         | 0.3%  | 0         | 0.0%         | 0.0%  | -         | 0.6%         | 0.3%  | 0         |
| <b>CDL Wastes</b>                |                             | <b>0.1%</b>  |       | <b>0</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.1%</b>  |       | <b>0</b>  |
| Dimension Lumber                 | Recoverable C&D             | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Clean Engineered Wood            | Non-recoverable             | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 0         |
| Treated Wood                     | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Contaminated wood                | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| New Gypsum Scrap                 | Recoverable C&D             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Demo Gypsum Scrap                | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Fiberglass Insulation            | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Asphalt/Bricks/Concrete          | Recoverable C&D             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Rock                             | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Asphaltic Roofing                | Recoverable C&D             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Carpet & Padding                 | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Construction Debris              | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| <b>Regulated Wastes</b>          |                             | <b>0.2%</b>  |       | <b>0</b>  | <b>0.0%</b>  |       | <b>-</b>  | <b>0.2%</b>  |       | <b>0</b>  |
| Latex Paints                     | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Oil-Based Paints/Solvents        | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Adhesives/Glues                  | Non-recoverable             | 0.0%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.1%  | 0         |
| Cleaners                         | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Pesticides/Herbicides            | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Batteries                        | Separated Recyclable        | 0.0%         | 0.0%  | 0         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | 0         |
| Vehicle Fluids                   | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Asbestos                         | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Explosives                       | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Clear & Orange Bag Medical Waste | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Red Bag Medical Waste            | Non-recoverable             | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         | 0.0%         | 0.0%  | -         |
| Other Chemical Waste             | Non-recoverable             | 0.2%         | 0.1%  | 0         | 0.0%         | 0.0%  | -         | 0.2%         | 0.1%  | 0         |
|                                  | <b>Mixed Recyclable</b>     | <b>22%</b>   |       | <b>5</b>  | <b>85%</b>   |       | <b>1</b>  | <b>24%</b>   |       | <b>6</b>  |
|                                  | <b>Compostable</b>          | <b>37%</b>   |       | <b>8</b>  | <b>13%</b>   |       | <b>0</b>  | <b>36%</b>   |       | <b>8</b>  |
|                                  | <b>Separated Recyclable</b> | <b>2%</b>    |       | <b>1</b>  | <b>1%</b>    |       | <b>0</b>  | <b>2%</b>    |       | <b>1</b>  |
|                                  | <b>Recoverable C&amp;D</b>  | <b>0%</b>    |       | <b>0</b>  | <b>0%</b>    |       | <b>0</b>  | <b>0%</b>    |       | <b>0</b>  |
|                                  | <b>Non-recoverable</b>      | <b>38%</b>   |       | <b>8</b>  | <b>1%</b>    |       | <b>0</b>  | <b>37%</b>   |       | <b>8</b>  |
| <b>Totals</b>                    |                             | <b>100%</b>  |       | <b>22</b> | <b>100%</b>  |       | <b>1</b>  | <b>100%</b>  |       | <b>23</b> |
| <b>Sample Count</b>              |                             |              |       | <b>13</b> |              |       | <b>10</b> |              |       |           |

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

# Appendix C. Campus Locations Included in Study

This appendix describes all garbage (G), recycling (R), and compost (O) containers included in the 2018 study. Generator groups for both the 2018 and 2003 study assigned to each building/facility and its accompanying containers are provided.

Table C-1. Collection Container Locations by 2018 Generator Group

| Location                | 2018 Generator Group | 2003 Generator Group             | Service Descriptions  |
|-------------------------|----------------------|----------------------------------|---|
| Allen Center for CSE    | Academic Buildings   | n/a                              | G: 1x2YARD DUMPSTER<br>R: 2x2YARD DUMPSTER;<br>8X96GAL TOTER<br>O: 1x2YARD DUMPSTER                   |
| Allen Library           | Academic Buildings   | Upper Campus Classroom Buildings | G: 2x2YARD DUMPSTER<br>R: 2x2YARD DUMPSTER<br>O: 2x2YARD DUMPSTER                                     |
| Chemistry Library       | Academic Buildings   | Upper Campus Classroom Buildings | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 1x96GAL TOTER   |
| Communications Building | Academic Buildings   | Upper Campus Classroom Buildings | G: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER  |
| Denny Hall              | Academic Buildings   | Upper Campus Classroom Buildings | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 2x96GAL TOTER  |
| Engineering Library     | Academic Buildings   | Lower Campus Laboratories        | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 2x96GAL TOTER   |
| Hutchinson Hall         | Academic Buildings   | Upper Campus Classroom Buildings | G: 2x96GAL TOTER<br>R: 1x96GAL TOTER<br>O: 1x96GAL TOTER  |
| John Wallace Hall       | Academic Buildings   | n/a                              | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 2x48GAL TOTER   |
| Kane Hall               | Academic Buildings   | n/a                              | R: 3x2YARD DUMPSTER   |
| Lewis Hall              | Academic Buildings   | Upper Campus Classroom Buildings | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 1x96GAL TOTER   |
| Mary Gates Hall         | Academic Buildings   | Upper Campus Classroom Buildings | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER;<br>3x96GAL TOTER<br>O: 1x96GAL TOTER;<br>1X2YARD DUMPSTER |
| Miller Hall             | Academic Buildings   | Upper Campus Classroom Buildings | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER  |
| Music Building          | Academic Buildings   | Upper Campus Classroom Buildings | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 3x96GAL TOTER  |

WASTE CHARACTERIZATION STUDY  
APPENDIX C. CAMPUS LOCATIONS INCLUDED IN STUDY

| Location                                     | 2018 Generator Group | 2003 Generator Group                  | Service Descriptions   |
|--|----------------------|---------------------------------------|--|
| Odegaard Undergraduate Library               | Academic Buildings   | Food Services                         | G: 1x20YARD ROLLOFF<br>O: 15x35GAL TOTER;<br>11x48GAL TOTER; 1X2YARD<br>DUMPSTER |
| Padelford Hall                               | Academic Buildings   | Upper Campus Classroom<br>Buildings   | G: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                                       |
| Parrington Hall                              | Academic Buildings   | Upper Campus Classroom<br>Buildings   | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 1x2YARD DUMPSTER                   |
| Raitt Hall                                   | Academic Buildings   | Upper Campus Classroom<br>Buildings   | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 2x96GAL TOTER                      |
| Savery Hall                                  | Academic Buildings   | Upper Campus Classroom<br>Buildings   | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                |
| Smith Hall                                   | Academic Buildings   | Arts buildings                        | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                |
| Social Work                                  | Academic Buildings   | West Campus Buildings                 | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 2x96GAL TOTER                      |
| William Gates Hall                           | Academic Buildings   | Maintenance Buildings                 | G: 2x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                |
| Atmospheric Sciences/<br>Geophysics Building | Campus Laboratories  | Lower Campus<br>Laboratories          | G: 2x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                |
| Bagley Hall                                  | Campus Laboratories  | Upper Campus Classroom<br>Buildings   | G: 2x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x48GAL TOTER                   |
| Benjamin Hall                                | Campus Laboratories  | Outdoor Litter<br>Receptacles: Cement | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 2x96GAL TOTER                      |
| Benson Hall                                  | Campus Laboratories  | Lower Campus<br>Laboratories          | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 2x96GAL TOTER                      |
| Bloedel Hall                                 | Campus Laboratories  | Health Sciences                       | G: 2x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 2x96GAL TOTER                   |
| Fishery Science Building                     | Campus Laboratories  | Lower Campus<br>Laboratories          | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 1x96GAL TOTER                      |
| Fluke Hall                                   | Campus Laboratories  | Lower Campus<br>Laboratories          | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 1x96GAL TOTER                      |
| Guggenheim Hall                              | Campus Laboratories  | n/a                                   | O: 2x96GAL TOTER   |

| Location                        | 2018 Generator Group | 2003 Generator Group      | Service Descriptions   |
|---------------------------------|----------------------|---------------------------|--|
| Guthrie Hall/ Physics Astronomy | Campus Laboratories  | Lower Campus Laboratories | G: 2x2YARD DUMPSTER<br>R: 2x2YARD DUMPSTER<br>O: 3x96GAL TOTER                   |
| Hall Health Center              | Campus Laboratories  | Lower Campus Laboratories | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                |
| Harris Hydraulic Labs           | Campus Laboratories  | Lower Campus Laboratories | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 1x48GAL TOTER                      |
| Henderson Hall                  | Campus Laboratories  | West Campus Buildings     | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 1x2YARD DUMPSTER                   |
| Kincaid Hall                    | Campus Laboratories  | Lower Campus Laboratories | G: 2x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 1x96GAL TOTER                      |
| Kirsten Wind Tunnel             | Campus Laboratories  | n/a                       | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER                                       |
| Marine Studies Building         | Campus Laboratories  | Lower Campus Laboratories | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 1x96GAL TOTER                      |
| Mechanical Engineering Building | Campus Laboratories  | Lower Campus Laboratories | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x96GAL TOTER                   |
| Merrill Hall                    | Campus Laboratories  | Maintenance Buildings     | G: 2x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 1x48GAL TOTER;<br>1X2YARD DUMPSTER |
| More Hall                       | Campus Laboratories  | Maintenance Buildings     | G: 1x2YARD DUMPSTER  |
| North Physics Lab               | Campus Laboratories  | Lower Campus Laboratories | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 1x96GAL TOTER                      |
| Ocean Sciences Building         | Campus Laboratories  | Lower Campus Laboratories | G: 2x2YARD DUMPSTER<br>O: 1x96GAL TOTER  |
| Washington Sea Grant Program    | Campus Laboratories  | West Campus Buildings     | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 1x48GAL TOTER;<br>1X2YARD DUMPSTER |
| Wilcox Hall                     | Campus Laboratories  | n/a                       | G: 2x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                |
| Wilson Annex & Ceramic Lab      | Campus Laboratories  | Lower Campus Laboratories | G: 2x96GAL TOTER<br>R: 1x96GAL TOTER   |
| Alder hall                      | Residence Halls      | n/a                       | G: 1x15YARD COMPACTOR<br>R: 1x15YARD COMPACTOR<br>O: 1x10YARD COMPACTOR          |
| Cedar Apartments                | Residence Halls      | n/a                       | G: 1x8YARD LUGGER<br>R: 1x8YARD LUGGER<br>O: 1x35GAL TOTER                       |

WASTE CHARACTERIZATION STUDY  
APPENDIX C. CAMPUS LOCATIONS INCLUDED IN STUDY

| Location                                       | 2018 Generator Group | 2003 Generator Group | Service Descriptions  |
|--|----------------------|----------------------|---|
| Elm Hall                                       | Residence Halls      | n/a                  | G: 1x8YARD LUGGER<br>R: 1x8YARD LUGGER<br>O: 10x32GAL TOTER                           |
| Hanseer Hall                                   | Residence Halls      | Residence Halls      | G: 1x24YARD COMPACTOR<br>R: 1x20YARD COMPACTOR<br>O: 2x35GAL TOTER;<br>6X96GAL TOTER  |
| Lander Hall                                    | Residence Halls      | n/a                  | G: 1x8YARD LUGGER<br>R: 1x8YARD LUGGER<br>O: 1x15YARD COMPACTOR                       |
| Maple Hall                                     | Residence Halls      | n/a                  | G: 1x8YARD LUGGER<br>R: 1x8YARD LUGGER  |
| McMahon Hall                                   | Residence Halls      | Residence Halls      | G: 1x30YARD COMPACTOR<br>R: 1x24YARD COMPACTOR<br>O: 82X35GAL TOTER;<br>2X48GAL TOTER |
| Mercer Hall                                    | Residence Halls      | Residence Halls      | G: 1x20YARD COMPACTOR<br>R: 1x20YARD COMPACTOR<br>O: 1x10YARD COMPACTOR               |
| Poplar Hall                                    | Residence Halls      | n/a                  | G: 1x8YARD LUGGER<br>R: 1x8YARD LUGGER<br>O: 9X35GAL TOTER;<br>1X48GAL TOTER          |
| Stevens Court                                  | Residence Halls      | n/a                  | G: 1x15YARD COMPACTOR<br>R: 1x15YARD COMPACTOR<br>O: 1X35GAL TOTER;<br>2X48GAL TOTER  |
| Terry Hall                                     | Residence Halls      | Residence Halls      | G: 1x8YARD LUGGER<br>R: 1x8YARD LUGGER  |
| Health Sciences Building AA -- G4              | Medical Center       | n/a                  | O: 4x2YARD DUMPSTER;<br>2X35GAL TOTER   |
| Roosevelt I                                    | Medical Center       | Medical Center       | G: 1x25YARD COMPACTOR<br>R: 2x4YARD DUMPSTER<br>O: 2x96GAL TOTER                      |
| Roosevelt II                                   | Medical Center       | Medical Center       | G: 1x20YARD ROLLOFF<br>R: 1x8YARD LUGGER<br>O: 1x96GAL TOTER                          |
| UW Medical Center                              | Medical Center       | Medical Center       | G: 1x30YARD COMPACTOR;<br>1x30YARD COMPACTOR  |
| CHDD Center for Human Development & Disability | Health Sciences      | Health Sciences      | G: 2x2YARD DUMPSTER<br>R: 3x96GAL TOTER<br>O: 1x96GAL TOTER                           |
| Health Sciences Building AA                    | Health Sciences      | Health Sciences      | G: 1x30YARD COMPACTOR<br>R: 1x2YARD DUMPSTER  |
| Health Sciences Building D                     | Health Sciences      | Health Sciences      | G: 1x30YARD COMPACTOR<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                   |

| Location                   | 2018 Generator Group | 2003 Generator Group                          | Service Descriptions  |
|----------------------------|----------------------|---|---|
| Health Sciences Building G | Health Sciences      | Health Sciences                               | G: 1x30YARD COMPACTOR<br>R: 2x2YARD DUMPSTER<br>O: 4X35GAL TOTER;<br>2X2YARD DUMPSTER           |
| Health Sciences Building K | Health Sciences      | Health Sciences                               | G: 1x30YARD COMPACTOR<br>R: 2x2YARD DUMPSTER<br>O: 2x96GAL TOTER                                |
| South Campus Center        | Health Sciences      | Food Services                                 | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 3x96GAL TOTER                                  |
| Architecture Hall          | Arts Buildings       | Arts buildings                                | G: 1x2YARD DUMPSTER<br>R: 2x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                               |
| Art Building               | Arts Buildings       | Arts buildings                                | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x1YARD DUMPSTER;<br>1X96GAL TOTER             |
| Ceramic & Metal Arts       | Arts Buildings       | Arts buildings                                | G: 1x96GAL TOTER;<br>1x2YARD DUMPSTER<br>R: 3x96GAL TOTER<br>O: 1X48GAL TOTER;<br>1X35GAL TOTER |
| Drama Scene Shop           | Arts Buildings       | Arts buildings                                | G: 1x2YARD DUMPSTER<br>R: 1x96GAL TOTER<br>O: 1x96GAL TOTER                                     |
| Gould Hall                 | Arts Buildings       | Arts buildings                                | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 2x96GAL TOTER;<br>1X48GAL TOTER                   |
| Henry Art Gallery          | Arts Buildings       | Arts buildings                                | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTER<br>O: 3X48GAL TOTER                                     |
| Hughes Penthouse Theater   | Arts Buildings       | Arts buildings                                | G: 2x96GAL TOTER<br>R: 1x96GAL TOTER<br>O: 1x96GAL TOTER  |
| Baseball Field             | Athletics Facilities | n/a   | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER                               |
| Conibear Shellhouse        | Athletics Facilities | n/a   | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 7X35GAL TOTER                                  |
| Dempsey Indoor Facility    | Athletics Facilities | ICA & IMA Facilities<br>(Athletic Facilities) | G: 2x2YARD DUMPSTER<br>R: 2x2YARD DUMPSTER  |
| Golf Driving Range         | Athletics Facilities | ICA & IMA Facilities<br>(Athletic Facilities) | G: 1x2YARD DUMPSTER   |
| Hec Edmundson Pavilion     | Athletics Facilities | ICA & IMA Facilities<br>(Athletic Facilities) | G: 1x30YARD COMPACTOR<br>R: 1x2YARD DUMPSTER  |

| Location                              | 2018 Generator Group     | 2003 Generator Group                          | Service Descriptions  |
|---------------------------------------|--------------------------|---|---|
|                                       |                          |   | O: 3X2YARD DUMPSTER;<br>5X35GAL Toter   |
| Husky Stadium                         | Athletics Facilities     | ICA & IMA Facilities<br>(Athletic Facilities) | G: 1x30YARD ROLL OFF<br>R: 1x25YARD COMPACTOR<br>O: 1x2YARD DUMPSTER          |
| Intramural Activities Building        | Athletics Facilities     | ICA & IMA Facilities<br>(Athletic Facilities) | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER             |
| Waterfront Activities Center          | Athletics Facilities     | ICA & IMA Facilities<br>(Athletic Facilities) | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x96GAL Toter                |
| Corp Yard 1                           | Maintenance Buildings    | Maintenance Buildings                         | G: 1x2YARD DUMPSTER   |
| Corp Yard 2                           | Maintenance Buildings    | Maintenance Buildings                         | G: 1x20YARD ROLLOFF   |
| Environmental Safety Storage Building | Maintenance Buildings    | Maintenance Buildings                         | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER                                    |
| Northlake Building                    | Maintenance Buildings    | Maintenance Buildings                         | G: 2x96GAL Toter<br>R: 1x96GAL Toter<br>O: 1x48GAL Toter                      |
| Plant Operations Building             | Maintenance Buildings    | Residence Halls                               | G: 1x2YARD DUMPSTER<br>R: 2x96GAL Toter<br>O: 2x96GAL Toter                   |
| Plant Services Building -- North Side | Maintenance Buildings    | Maintenance Buildings                         | G: 1x2YARD DUMPSTER<br>R: 2x96GAL Toter<br>O: 1x48GAL Toter;<br>1X96GAL Toter |
| Plant Services Building -- West Side  | Maintenance Buildings    | Maintenance Buildings                         | G: 1x2YARD DUMPSTER<br>R: 2x96GAL Toter<br>O: 1x96GAL Toter                   |
| Power Plant                           | Maintenance Buildings    | Maintenance Buildings                         | G: 1x2YARD DUMPSTER<br>R: 1x96GAL Toter                                       |
| SW Zone Maintenance Building          | Maintenance Buildings    | n/a   | G: 2x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x96GAL Toter                |
| UW Police Building                    | Maintenance Buildings    | West Campus Buildings                         | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER             |
| Condon Hall                           | Administrative Buildings | West Campus Buildings                         | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 1x2YARD DUMPSTER             |
| Gerberding Hall                       | Administrative Buildings | Upper Campus Classroom Buildings              | G: 1x2YARD DUMPSTER<br>R: 1x2YARD DUMPSTER<br>O: 2x96GAL Toter                |
| Student Union Building                | Administrative Buildings | Food Services                                 | G: 1x30YARD COMPACTOR<br>R: 1x20YARD COMPACTOR<br>O: 1x20YARD COMPACTOR       |

| Location   | 2018 Generator Group                      | 2003 Generator Group                   | Service Descriptions  |
|--|---|--|---|
| Publication Services Building  | Administrative Buildings                  | West Campus Buildings                  | G: 1x2YARD DUMPSTER<br>R: 2x96GAL TOTES<br>O: 2x96GAL TOTES                           |
| Purchasing and Accounting Building   | Administrative Buildings                  | West Campus Buildings                  | G: 2x96GAL TOTES<br>R: 3x96GAL TOTES<br>O: 1x96GAL TOTES                              |
| Staff Human Resources Building (Transportation Services Building)                | Administrative Buildings                  | West Campus Buildings                  | G: 2x96GAL TOTES<br>R: 2x96GAL TOTES<br>O: 1x96GAL TOTES                              |
| UW Tower   | Administrative Buildings                  | n/a                                    | G: 1x30YARD COMPACTOR<br>R: 2x2YARD DUMPSTER<br>O: 6x48GAL TOTES;<br>2X2YARD DUMPSTER |
| Architecture Hall Exterior   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a  |
| Art Building -- SW Corner  | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a  |
| Bank of America Executive Education Center -- West Entry                         | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a  |
| Center on Human Development and Disability Clinic -- Behind CHDD On Canal        | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a  |
| Center on Human Development and Disability EEU -- Behind building by the benches | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a  |
| Clark Hall   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a  |
| Climbing Rock  | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a  |
| Condon Hall -- Exterior  | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 3 SMART CAN<br>R: 3 SMART CAN<br>O: n/a  |
| Denny Field -- Barbeque Area   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 4 SMART CAN<br>R: 4 SMART CAN<br>O: n/a  |
| Denny Hall -- Memorial Way   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a  |
| Electrical Engineering Building -- Front Entrance                                | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a  |
| Fluke Hall -- Exterior   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a  |

| Location  | 2018 Generator Group                      | 2003 Generator Group                   | Service Descriptions                       |
|---|---|--|--|
| Gerberding Hall -- Grant Lane Roundabout                | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Guthrie Annex 4 -- Bus Stop                             | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Guthrie Hall -- Back Entrance                           | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Guthrie Hall -- Front Entrance                          | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Haggett Hall -- Whitman Court Road                      | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 3 SMART CAN<br>R: 3 SMART CAN<br>O: n/a |
| Hall Health Center -- Exterior                          | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Harris Hydraulics Laboratory                            | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Health Sciences HSB D-Wing -- Loading Dock Shuttle Stop | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Health Sciences HSB E-Wing -- E-Court                   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |
| Health Sciences HSB G-Wing -- Courtyard                 | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 3 SMART CAN<br>R: 3 SMART CAN<br>O: n/a |
| Health Sciences HSB I-Wing                              | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Health Sciences HSB K-Wing -- Courtyard                 | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 3 SMART CAN<br>R: 3 SMART CAN<br>O: n/a |
| Health Sciences HSB T-Wing -- NW T-Wing Patio           | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |
| Henderson Hall  | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Henry Art Gallery -- Loading Dock                       | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Hitchcock Hall -- Bus Stop                              | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |

| Location   | 2018 Generator Group                      | 2003 Generator Group                      | Service Descriptions                       |
|--|---|---|--|
| Intellectual House -- Courtyard                            | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Intramural Activities -- Wahkiakum Lane/ North Side        | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |
| McMahon Hall -- Whitman Court Road                         | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Meany Hall -- Bus Stop                                     | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Meany Hall -- Garage Entrance                              | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Mechanical Engineering Building -- North End               | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Medicinal Herb Garden -- Stevens Way Bus Stop              | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Merrill Hall   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 5 SMART CAN<br>R: 5 SMART CAN<br>O: n/a |
| North Physics Lab  | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Padelford Parking Garage -- Mason Road & Pend Oreille Road | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Sakuma Viewpoint   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |
| Schmitz Hall   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |
| South Campus Center -- Patio                               | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |
| South Campus Center -- Waterfront Park on San Juan         | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |
| Staff Human Resources Building                             | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a |
| Sylvan Theater   | Outdoor Litter Receptacles:<br>Smart Cans | Outdoor Litter<br>Receptacles: Smart Cans | G: 2 SMART CAN<br>R: 2 SMART CAN<br>O: n/a |

| Location  | 2018 Generator Group                             | 2003 Generator Group                      | Service Descriptions   |
|---|--|---|--|
| University Facilities Building -- Back Entrance             | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a                   |
| University Facilities Building -- Front Entrance            | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a                   |
| UW Medical Center -- Back Stairs of cafeteria entrance      | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a                   |
| UW Medical Center -- Entrance/ SE Magnuson & Pacific        | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a                   |
| UW Tower -- Bus Stop  | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a                   |
| UW Tower -- Entrance/Courtyard                              | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 5 SMART CAN<br>R: 5 SMART CAN<br>O: n/a                   |
| Waterfront Activities Center                                | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 7 SMART CAN; 7 Toter<br>R: 7 SMART CAN; 7 Toter<br>O: n/a |
| William H. Gates Hall                                       | Outdoor Litter Receptacles:<br>Smart Cans        | Outdoor Litter<br>Receptacles: Smart Cans | G: 1 SMART CAN<br>R: 1 SMART CAN<br>O: n/a                   |
| Allen Center for CSE Exterior                               | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |
| Anderson Hall -- Bus Stop                                   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |
| Bagley Hall -- Steps  | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |
| Bloedel Hall -- Near Burke Trail                            | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |
| Burke Museum -- By Stairs                                   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |
| Communications Building -- Bus Stop                         | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |
| Denny Hall -- near Paccar                                   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |
| Electrical Engineering Building -- near Drumheller Fountain | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                                       | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY              |

| Location   | 2018 Generator Group                             | 2003 Generator Group | Service Descriptions                            |
|--|--|----------------------|---|
| Foege Building   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Gerberding Hall -- Red Square                                  | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Guggenheim Hall -- near<br>Drumheller Fountain                 | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Husky Union Building (HUB) -- Bike<br>Rack                     | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Husky Union Building (HUB) -- Bus<br>Stop                      | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Husky Union Building -- Main<br>Entrance (West)                | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Husky Union Building -- North<br>Entrance                      | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Husky Union Building -- SW<br>Entrance                         | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Hutchinson Hall - Exterior                                     | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Intramural Activities -- Entrance                              | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Kane Hall -- SE Side/ Red Square                               | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Kane Hall -- SW Side/ Red Square                               | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Mackenzie Hall   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Mary Gates Hall - Exterior                                     | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Meany Hall -- East Side, by Red<br>Square food trucks          | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Mechanical Engineering Building --<br>Courtyard on Stevens Way | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |

| Location   | 2018 Generator Group                             | 2003 Generator Group | Service Descriptions                            |
|--|--|----------------------|---|
| Miller Hall -- Skagit Lane   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Music Building -- Art & Music Plaza                                    | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Odegaard Library (OUGL) -- East Entrance/Red Square                    | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Odegaard Library (OUGL) -- South Entrance/Red Square                   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Odegaard Library (OUGL) -- South Side by George/Meany Plaza/Red Square | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Padelford Hall -- Bus Stop   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Parking Lot C-14 -- Jefferson Road Stairs                              | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Parrington Hall -- Memorial Way/<br>Night Shuttle Stop                 | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Physics/Astronomy Building -- courtyard                                | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Rainier Vista -- Montlake Triangle Pedestrian Bridge                   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Rainier Vista -- Red Square  | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Raitt Hall -- West Side  | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Savery Hall -- Spokane Lane near Red Square                            | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Sieg Hall -- on Benton Lane  | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |
| Suzzallo Library -- near HUB   | Outdoor Litter Receptacles:<br>Bigbelly Stations | n/a                  | G: 1 BIGBELLY<br>R: 1 BIGBELLY<br>O: 1 BIGBELLY |

# Appendix D. Analytical Procedures

To develop composition and quantity profiles for this study, three main steps were taken. These steps are as follows.

1. Calculate the estimated composition of the waste.
2. Calculate the estimated quantity of waste.
3. Combine composition and quantity estimates using a weighted average procedure.

Each of these steps is described in detail below.

## Estimating Compositions

### Composition Calculations

All composition calculations performed for this study are consistent with those for the City of Seattle's Waste Composition Studies, King County's Waste Comprehensive Waste Stream Characterization Studies, and similar studies for additional state and local governmental agencies.

The composition estimates represent the ratio of the **ratio of the components' weight to the total sample weight** for each noted waste stream (e.g., the percent of newspaper, by weight, of all Upper Campus Classroom waste hauled by UW).

They are derived by summing each component's weight across all of the selected records and dividing by the sum of the total sample weight, as shown in the following equation:

$$r_j = \frac{\sum_i c_{ij}}{\sum_i w_i}$$

where:

r = ratio of components' weight to the total sample weight

c = weight of particular component

w = sum of all component weights

for  $i = 1$  to  $n$

where  $n$  = number of selected samples

for  $j = 1$  to  $m$

where  $m$  = number of components

The confidence interval for this estimate is derived in two steps. First, the variance around the estimate is calculated, accounting for the fact that the ratio includes two random variables (the component and total sample weights). The **variance of the ratio estimator** equation follows:

$$\hat{V}_{r_j} = \left(\frac{1}{n}\right) \cdot \left(\frac{1}{\bar{w}^2}\right) \cdot \left(\frac{\sum_i (c_{ij} - r_j w_i)^2}{n-1}\right)$$

where:

$$\bar{w} = \frac{\sum_i w_i}{n}$$

Second, **error rates** at the 90% confidence interval were calculated for a component's mean as follows:

$$r_j \pm \left(t \cdot \sqrt{\hat{V}_{r_j}}\right)$$

where:

t = the value of the t-statistic (1.645) corresponding to a 90% confidence level

## Volume-to-weight Conversions for Visual Samples

The composition calculations described above rely on the availability of individual material weights for each sample. For most of the waste examined in this study, weights were gathered by hand-sorting each sample. However, as described in *Appendix D. Analytical Procedures*, the medical waste sampling methodology is volume-based.

To convert volumetric estimates to weights for all materials detected in samples from the medical center and health sciences buildings, Cascadia converted all volumetric estimates to weights using industry-standard waste density factors.

Using the volume-to-weight conversion factors and the volume estimates obtained in the field, individual material weights were calculated using the following formula:

$$c = m * s * v * d$$

where:

- m = percentage estimate of the main material class (e.g., paper)
- s = percentage estimate of the specific material type (e.g., newspaper)
- v = total volume of the sample (in cubic yards)
- d = density conversion of the specific material type (in pounds/cubic yard)

The individual material weights were then aggregated using the calculation procedures described in the first section of this appendix.

## Estimating Quantities of the Waste

Cascadia’s analysis is based on disposal quantities from October 2016 through September 2017. These quantities (as tonnages of garbage, recycling, and compost) were provided by UW and its collection services vendors (Waste Management and Cedar Grove) for this material.

Table D-1 summarizes the as-reported annual waste tonnages used for this study.

**Table D-1. Summary of Annual Tons (October 2016–September 2017)**

| Generator Group                    | Annual Tons  |            |                |              |              |
|------------------------------------|--------------|------------|----------------|--------------|--------------|
|                                    | Garbage      | Recycling  | Combined Fiber | Compost      | Generation   |
| Academic Buildings                 | 247          | 169        | 123            | 307          | 847          |
| Administrative Buildings           | 152          | 123        | 39             | 192          | 507          |
| Arts and Design Buildings          | 55           | 36         | 37             | 35           | 164          |
| Athletic and Recreation Facilities | 132          | 82         | 46             | 119          | 379          |
| Campus Laboratories                | 275          | 74         | 130            | 110          | 590          |
| Health Sciences                    | 581          | 70         | 159            | 121          | 931          |
| Maintenance Buildings              | 201          | 18         | 44             | 23           | 285          |
| Medical Center                     | 1,528        | 121        | 200            | 173          | 2,023        |
| Residence Halls                    | 645          | 282        | 103            | 292          | 1,322        |
| Bigbelly Stations                  | 22           | 9          | -              | 15           | 46           |
| Smart Cans                         | 22           | 1          | -              | -            | 23           |
| <b>Overall</b>                     | <b>3,861</b> | <b>986</b> | <b>883</b>     | <b>1,387</b> | <b>7,116</b> |

The study only considers disposed municipal solid waste generated by UW’s campus in Seattle. The following materials were not included in the study:

- ▶ Wastes from UW-owned facilities located outside of the campus area.
- ▶ Biohazardous and other medical wastes from the medical center and health sciences facilities requiring special treatment (e.g., sharps waste, pathological discards, and radioactive specimens).
- ▶ Materials recovered through University recycling and reuse programs (e.g., materials auctioned through the surplus program).
- ▶ Construction and demolition wastes from building projects located on University property (responsibility held by the company contracted to perform the construction work).

## Combining Compositions and Quantities

A *weighted average* calculation was used to estimate the composition of the campus-wide waste stream, as well as for each of the generator groups defined for the study. This calculation averages the composition of waste from various groups (strata) and assigns a relative importance (weighting) to samples from each. The weighting groups and associated weighting factors are calculated based on the annual quantities disposed during the baseline period for the study (October 2016 through September 2017) overall and by generator group.

The **weighted average for a composition estimate** was performed as follows:

$$O_j = (p_1 * r_{j1}) + (p_2 * r_{j2}) + (p_3 * r_{j3}) + \dots$$

where:

$p$  = the proportion of tonnage contributed by the noted generator group and stream

$r$  = ratio of individual material component weight to total waste weight in the noted generator group and stream

for  $j = 1$  to  $m$

where  $m$  = number of material components

## COMPARISON CALCULATIONS

To compare garbage disposal in the most recent study to past studies, Cascadia normalized disposal to population and building size for a waste disposal rate. Factors that influence waste disposal at the University, such as total population, student enrollment, and square footage are presented in the table below, along with the comparable data from past study years.

Per-capita disposal rates presented both in the main body of the report and accompanying appendices include faculty, staff, and matriculating students. Non-matriculating students were not included in the analyses.

Table D-2. Campus Demographics Data

| Description  | 2018       | 2003      | 1989      | Source   |
|--|------------|-----------|-----------|--|
| <b>Population (excluding non-matriculating students)</b> | 89,548     | 59,516    | 46,166    | 2018 - UW Office of Planning & Budgeting Institutional Data & Analysis.<br>2003 - Peter Dewey, Transportation Services.<br>1989 - from Waste Stream Analysis Report (p. 79).   |
| <b>Building Square Footage</b>                           | 11,720,014 | 8,008,767 | 6,386,213 | 2018 - Michelle Reed, Executive Director, Capital & Space Management, Capital Planning & Development<br>2003 - Dan Trythall, Manager, Capital and Space Planning.<br>1989 - from Waste Stream Analysis Report (Appendix C).                          |
| <b>Res Hall Student Occupancy</b>                        | 8,672      | 4,934     | 4,227     | 2018 - Kate B. Flowers, Housing and Food Services Facilities Manager for Custodial Services<br>2003 - <a href="http://hfs.washington.edu/about_hfs/">http://hfs.washington.edu/about_hfs/</a> .<br>1989 - from Waste Stream Analysis Report (p. 79). |
| <b>Res Hall Square Footage</b>                           | 2,955,849  | 890,695   | 746,704   | 2018 - Kate B. Flowers, Housing and Food Services Facilities Manager for Custodial Services<br>2003 - Dan Trythall, Manager, Capital and Space Planning.<br>1989 - from Waste Stream Analysis Report (p. 65).  |
| <b>Medical Center Patients</b>                           | 338,399    | 330,298   | 142,624   | 2018 - Marty Francois, Director UWMC Design and Construction Management<br>2003 - Health Science News and Information.<br>1989 - from Waste Stream Analysis Report (p. 79).  |
| <b>Medical Center Square Footage</b>                     | 2,125,000  | 435,863   | 598,810   | 2018 - Marty Francois, Director UWMC Design and Construction Management<br>2003 - Dan Trythall, Manager, Capital and Space Planning.<br>1989 - from Waste Stream Analysis Report (p. 68).  |
| <b>Health Sciences Square Footage</b>                    | 1,914,741  | 1,237,661 | 884,761   | 2018 - Paul Siscel, Magnuson Health Sciences Building Management and Health Sciences Security, data based on GeoSIMS reports<br>2003 - Dan Trythall, manager, Capital and Space Planning.<br>1989 - from Waste Stream Analysis Report (p. 70).       |

## Appendix E. Field Forms

This appendix contains copies of the primary forms used for the study's fieldwork activities. Cascadia's field team used internet-enabled tablet devices to collect data electronically based on these forms.

1. Sample placards
2. Material tally sheet
3. Visual characterization tally sheet (used for UW Medical Center and Health Sciences visual samples)

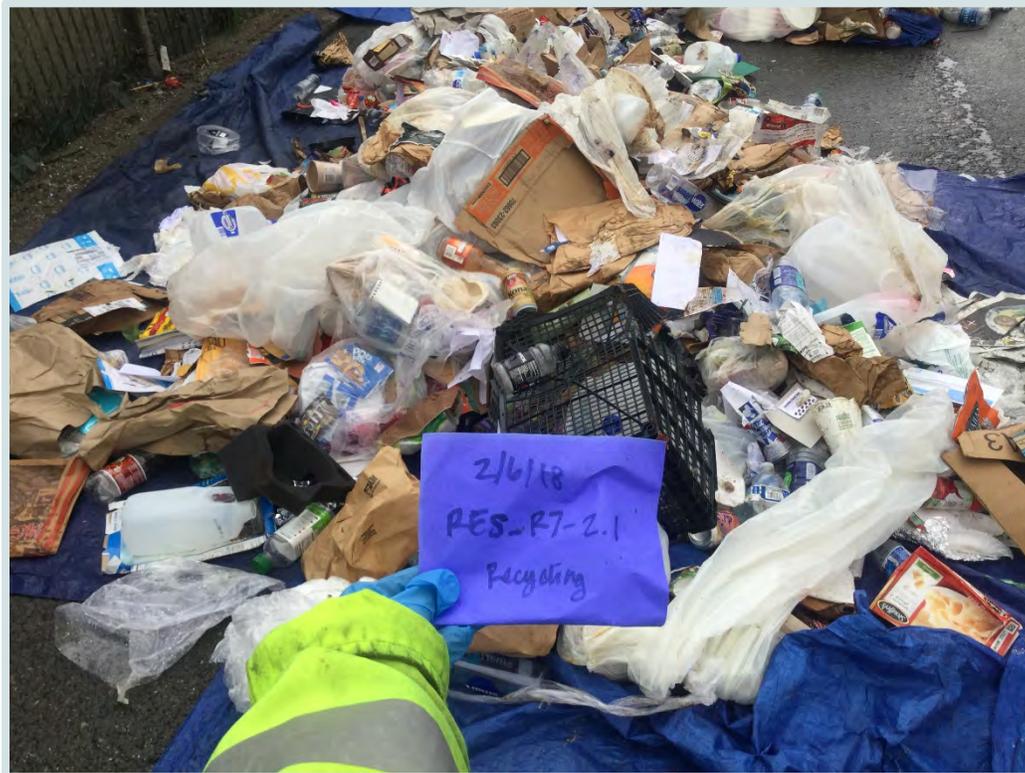


Figure E-1. Sample Placards

|                 |  |
|-----------------|--|
| Date: 2/5/2018  | <h1>RES_G6-1</h1><br><h2>Cedar Apartments</h2> |
| # of Samples: 2 |  |



Figure E-3. Visual Characterization Tally Sheet

**Step 1:**

Date: \_\_\_\_\_

Sample ID: \_\_\_\_\_

**Step 2: Measure sample volume and weight.**

Dimensions:  
\_\_\_\_\_ ft x \_\_\_\_\_ ft x \_\_\_\_\_ ft

Weight: \_\_\_\_\_ (lbs)

**Step 3: Inventory all broad material classes (in bold) that appear in the sample.**

**Step 4: Estimate composition of sample by volume for each broad material class (in bold).**

**Step 5: For each broad class, estimate composition by volume of each specific component (in plain text).**  
**Note! Record specific components comprising less than 5% of the broad class as "other."**

**Step 6: Be sure broad material class estimates AND specific material component estimates EACH total 100%.**

**Paper: \_\_\_\_\_%**

|  |   |
|--|---|
|  | Newspaper                                     |
|  | Plain OCC/Kraft Paper                         |
|  | Waxed OCC/Kraft Paper                         |
|  | High-grade Paper                              |
|  | Mixed Low-grade Paper                         |
|  | Non-compostable Single-use Food Service Paper |
|  | Polycoated/Aseptic Packaging                  |
|  | Compostable/Soiled Paper                      |
|  | Hardcover Books                               |
|  | Paper/Other Materials                         |
|  | <b>Subtotal (must equal 100%)</b>             |
|  | %   |

**Plastics: \_\_\_\_\_%**

|  |  |
|--|--|
|  | PET Bottles and Containers                   |
|  | HDPE Natural Bottles and Tubs                |
|  | HDPE Colored Bottles and Tubs                |
|  | Compostable Single-use Food Service Plastics |
|  | #3-7 Packaging                               |
|  | Expanded Polystyrene                         |
|  | Other Rigid Packaging                        |
|  | Bagged Clean Shopping/Dry Cleaner Bags       |
|  | Loose Clean Shopping/Dry Cleaner Bags        |
|  | Other Clean Polyethylene Film                |
|  | Compostable Bags                             |
|  | Latex/Nitrile Gloves                         |
|  | Other Film                                   |
|  | Bed Pans/Basins/Trays                        |
|  | i.V. Bags and Tubing                         |
|  | Respiratory Hoses                            |
|  | Draping/Sterile Wrap/Gowns                   |
|  | Other Plastic Products                       |
|  | Plastic/Other Materials                      |
|  | <b>Subtotal (must equal 100%)</b>            |
|  | %  |

**CDL Wastes: \_\_\_\_\_%**

|  |                                   |
|--|-----------------------------------|
|  | Dimension Lumber                  |
|  | Clean Engineered Wood             |
|  | Treated Wood                      |
|  | Contaminated wood                 |
|  | New Gypsum Scrap                  |
|  | Demo Gypsum Scrap                 |
|  | Fiberglass Insulation             |
|  | Asphalt/Bricks/Concrete           |
|  | Rock                              |
|  | Asphaltic Roofing                 |
|  | Carpet and Padding                |
|  | Construction Debris               |
|  | <b>Subtotal (must equal 100%)</b> |
|  | %                                 |

**Other Wastes: \_\_\_\_\_%**

|  |                                   |
|--|-----------------------------------|
|  | Textiles                          |
|  | Mixed Textiles                    |
|  | Leather                           |
|  | Disposable Diapers                |
|  | Animal By-products                |
|  | Rubber Products                   |
|  | Tires                             |
|  | Ash                               |
|  | Furniture                         |
|  | Mattresses                        |
|  | Small Appliances                  |
|  | Cell Phones and Tablets           |
|  | CRT Monitors/Televisions          |
|  | Non-CRT Monitors/Televisions      |
|  | Other Electronics                 |
|  | Ceramics/Porcelain                |
|  | Fines and Miscellaneous           |
|  | <b>Subtotal (must equal 100%)</b> |
|  | %                                 |

**Regulated: \_\_\_\_\_%**

|  |                                   |
|--|-----------------------------------|
|  | Latex Paints                      |
|  | Oil-Based Paints/Solvents         |
|  | Adhesives/Glues                   |
|  | Cleaners                          |
|  | Pesticides/Herbicides             |
|  | Batteries                         |
|  | Vehicle Fluids                    |
|  | Asbestos                          |
|  | Explosives                        |
|  | Clear & Orange Bag Medical Waste  |
|  | Red Bag Medical Waste             |
|  | Other Chemical Waste              |
|  | <b>Subtotal (must equal 100%)</b> |
|  | %                                 |

**Glass: \_\_\_\_\_%**

|  |                                   |
|--|-----------------------------------|
|  | Beverage Glass                    |
|  | Container Glass                   |
|  | Light Bulbs and Tubes             |
|  | Lab Glass                         |
|  | Other Glass                       |
|  | <b>Subtotal (must equal 100%)</b> |
|  | %                                 |

**Organics: \_\_\_\_\_%**

|  |                                   |
|--|-----------------------------------|
|  | Pallets and Crates                |
|  | Leaves/Grass/Prunings             |
|  | Other Untreated wood              |
|  | Food                              |
|  | Other Organics                    |
|  | <b>Subtotal (must equal 100%)</b> |
|  | %                                 |

**Metals: \_\_\_\_\_%**

|  |                                   |
|--|-----------------------------------|
|  | Aluminum Cans                     |
|  | Other Single-use Aluminum         |
|  | Other Nonferrous                  |
|  | Tin Food Cans                     |
|  | Empty Aerosol Cans                |
|  | Other Ferrous                     |
|  | Oil Filters                       |
|  | Mixed Metals/Materials            |
|  | <b>Subtotal (must equal 100%)</b> |
|  | %                                 |

**Grand Total**

\_\_\_\_\_ %

**(Must equal 100%)**

**Notes:**