

# Leon County Solid Waste Management Division 2011 Waste Characterization Study

October 21, 2011



# **1.0 Introduction and Objectives**

The Leon County Solid Waste Management Division (SWMD) retained HDR Engineering, Inc. (HDR) to conduct a two-phase waste audit of Class I County waste. The purpose of the waste audit is to analyze the composition of residential and commercial Class I waste delivered to the Leon County Transfer Station, in an effort to obtain County-specific data regarding various recyclable materials in the disposed waste stream. The results of this study will:

- Assist Leon County (County) in identifying targets of opportunity that will allow it to move toward the State of Florida's 75 percent recycling goal;
- Assist the County in developing future solid waste programs, including more focused and cost-effective resource management and recycling programs; and
- Assist the County in providing more accurate data for state reporting purposes.

Section 2 of this report summarizes the methodology used to conduct the waste audit, and Section 3 presents key findings and waste composition results for each of the sectors analyzed in the study. The appendices that follow the main body of the report provide additional detail on the study, including definitions of material types, composition calculations, and detailed waste composition results.

# 2.0 Summary of Methodology

HDR implemented the following three-phase methodology to characterize Leon County's disposed Class I waste stream:

- 1. Prepare for sampling to ensure data collection is statistically sound and efficient, and that study results would meet the SWMD's objectives.
- 2. Collect composition data through two phases of sampling and hand sorting.
- 3. Analyze data and provide a report to document findings of the study.

Each of the three phases is summarized below.

# 2.1 Prepare for Sampling

The sampling methodology for this study was guided by the scope of work requested by the SWMD, and followed industry-accepted standards for statistical sampling, as outlined in the ASTM Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste (D5231-92; reapproved 2003). The following steps were taken in preparation for the actual sampling and sorting events:

# Step 1: Identify Universe

The first step in planning the waste audit was to identify and carefully define the waste streams to be studied, or the "universe" of waste. In this study, the "universe" included all loads of Leon County Class I municipal solid waste (MSW) delivered to the Leon County Transfer Station.

## Step 2: Define Waste Sectors

When characterizing waste, analyzing the total waste stream based on particular generator sectors can provide more detailed information and can increase the accuracy of results. This study divided the County's disposed Class I waste stream into two generator sectors: residential and commercial. Table 2.1 outlines how the residential and commercial sectors were defined for the purposes of this study.

| TABLE 2.1 - SUMMARY | OF TARGETED SECTORS |  |
|---------------------|---------------------|--|
|                     |                     |  |

| SECTOR      | DESCRIPTION                                                                           |
|-------------|---------------------------------------------------------------------------------------|
| Residential | Single-family, Multi-family, Rural Waste Service Centers                              |
| Commercial  | Grocery, Hospitality, Large Retail, Small Office, University,<br>Government, Hospital |

The County expressed initial interest in also targeting the institutional sector as a separate generator category for this study. This sector would have included: universities, the State Capitol Complex, hospitals, clinics and the like. However, due to difficulties in ensuring an adequate number of samples of purely institutional waste, the institutional sector was not included as a separate generator sector, and has been incorporated into the commercial sector.

In an effort to provide the County with anecdotal data on the institutional sector where possible, HDR made a concerted effort throughout the course of the sampling and sorting activities to identify any sampled loads containing purely institutional waste so that the data could be viewed independently of other commercial data.

# **Step 3: Establish Characterization Categories**

HDR worked with SWMD staff to establish 22 material types for sampling purposes – 21 for various recyclable materials and another for residue or non-recyclable items. The material categories were organized into eight material classes: glass, metal, plastic, paper, organics, hazardous/special waste, other recyclables, and residue/composite MSW. The 22 material types are listed and defined in Appendix A.

During the second (September) sorting event, the residue category was further divided into seven additional sub-categories in order to provide the County with a greater level of understanding of the items contained in the residue material category. The sub-categories included: non-recyclable glass/ceramics, plastic film, expanded polystyrene, other plastics, all other materials, fines less than 2 inches, and fines less than 1 inch.

#### Step 4: Allocate Samples

Sample selection was organized by generator sector, with the goal of sorting a sufficient number of samples for each sector to achieve results with a 90 percent confidence level. Because commercial waste is generally more heterogeneous than residential waste, a greater number of commercial samples were sorted. Tables 2.2 and 2.3 show the planned allocation of samples by sector and vehicle type compared to the actual number of samples collected, sorted, and analyzed.

The sampling targets were developed based on historical scale house data from the Leon County Transfer Station. Most of the sampling targets were met or exceeded. However, one notable revision to sample selection was made in the field. Based on HDR's initial review of the historical scale house data, it appeared that the majority of residential multi-family waste was delivered in front-load collection vehicles. However, during the course of sampling and sorting activities, HDR discovered that a larger than anticipated amount of multi-family waste was being delivered to the facility in roll-offs rather than front-load vehicles. Therefore, HDR adjusted the sampling plan in the field to account for this difference.

| SECTOR      | TARGETED | AC    | TUAL      |
|-------------|----------|-------|-----------|
|             |          | April | September |
| Residential | 16       | 18    | 17        |
| Commercial  | 34       | 33    | 33        |
| TOTAL       | 50       | 51    | 50        |

# TABLE 2.2 - TARGETED & ACTUAL LOADS SAMPLED BY SECTOR

# TABLE 2.3 - TARGETED & ACTUAL LOADS SAMPLED BY SECTOR & VEHICLE TYPE

| SECTOR      | VEHICLE TYPE | TARGETED | AC    | TUAL      |
|-------------|--------------|----------|-------|-----------|
|             |              |          | April | September |
| Residential |              |          |       |           |
|             | Front-load   | 8        | 3     | 0         |
|             | Rear-load    | 5        | 3     | 8         |
| 1           | Side-load    | 2        | 3     | 2         |
|             | Roll-off     | 1        | 9     | 7         |
| TOTAL       |              | 16       | 18    | 17        |
| Commercial  |              |          | -     |           |
|             | Roll-off     | 18       | 17    | 20        |
|             | Front-load   | 13       | 13    | 10        |
|             | Rear-load    | 3        | 3     | 3         |
| TOTAL       |              | 34       | 33    | 33        |



### Step 5: Determine Sampling Calendar

Data collection was spread across two sampling and sorting events. The first sort occurred April 18-22, 2011 and the second sort occurred September 12-16, 2011. A two-season approach was used in order to examine the effects of seasonal impacts such as transient residents, the growing season, consumer habits, and tourism.

### Step 6: Develop Safety Plan

HDR prepared a site safety plan that was followed by all staff throughout the sorting events. HDR worked closely with County transfer station staff to organize the setup of the sorting area to ensure worker safety. Transfer station staff set up barricades, where needed, to cordon off the sorting and sampling areas to protect workers from incoming and outgoing collection vehicles. Each morning of the events, sorters were given thorough safety instructions and personal protective equipment by the HDR field supervisor to ensure safety and proper sorting. No injuries or emergencies occurred during the April or September sorting events.

# 2.2 Collect Data

The data collection phase included the following tasks: coordinating with facility staff and vehicle drivers, characterizing samples into defined material types, and recording the required sample data.

## Step 1: Select Loads

The April and September sampling and sorting events each spanned four weekdays (Monday-Thursday) and involved the capture and sampling of waste from a variety of vehicle types for the residential and commercial sectors. The HDR field supervisor randomly selected incoming vehicles in a manner that ensured the target number and type of samples for each generator sector was achieved. Drivers of incoming vehicles were interviewed to confirm the generator sector and origin of the waste.

Once a load was selected for sampling, the HDR field supervisor noted the following information on the data recording form: date, sample identification number, generator sector, and vehicle type. The field supervisor also noted other information regarding the source of the load when available, such as the geographic area the load originated from, and whether it originated from a university, multifamily residences, or Rural Waste Service Centers. The vehicle driver was then directed to the sampling area to tip. A representative sample of 200-300 pounds was pulled and placed in a bin and labeled to await sorting.



Figure 2.1: Typical sample

Figure 2.1 depicts a typical sample ready for sorting.

#### Step 2: Characterize Samples

Samples were then sorted into the previously defined material categories. Figure 2.2 depicts the sorting activities, which were monitored by an HDR crew chief. After the entire sample was sorted, the HDR field supervisor weighed and recorded the weights of each container on a data recording form. Tare weights of empty containers, recorded prior to sorting, were subtracted from the weights of the containers after sorting to obtain the net weight of each material category. The field supervisor noted any conditions, such as wet loads resulting from rain that could impact material



Figure 2.2: Sorting activities

weights, and also made note of unusual items or large quantities of materials sorted into nonspecific categories such as residue.

A total of 101 samples of disposed Class I waste were characterized, 51 during the April sampling event and 50 during the September sampling event. A complete copy of the sampling and sorting plan is included in Appendix A.

#### Analyze Data and Prepare Report

#### Step 1: Enter and Analyze Data

Following each sampling event, HDR calculated the weighted average of each material category for each sample. Samples for each generator sector were then combined to obtain weighted material category averages for that generator. HDR then completed the statistical analysis to determine the overall disposed Class I waste composition.

#### **Step 2: Interim and Final Reports**

The, study methodology and composition results, based on data gathered during the April sampling event, were documented and summarized in an interim report that was provided to the County in May 2011. HDR updated the report with additional data from the September sampling event, statistical analysis, and overall findings for the study.

# **3.0 Results and Findings**

This section presents the results of the waste audit for each of the generator sectors included in the study, as well as for the overall composition of Class I waste disposed at the County's transfer station. All results are expressed in percentage by weight. The percentages included in the tables and figures are the mean values for each material category. Where appropriate, the tables also provide the 90 percent confidence intervals for each material category. The confidence interval indicates that, with a 90 percent level of confidence, the actual arithmetic mean (the arithmetic mean obtained if an infinite number samples were sorted) is within the upper and lower limits shown. This provides an understanding of how much variation occurred in the quantity of that material category found in the samples sorted. Generally, the more homogeneous the waste stream and the greater the number of samples sorted, the higher the level of accuracy achieved and the narrower the margin between the upper and lower bounds of the confidence interval.

Each of the tables included in this section list the results for all 22 material categories. In the corresponding pie charts, categories with a zero percent are not shown.

# 3.1 Composition of Overall Waste Stream

Figure 3.1 depicts the overall annual composition of Class I waste delivered to the Leon County Transfer Station. It combines the data from both sorting events and all generator sectors. Table 3.1 compares the results of the April and September sorting events. Table 3.2 presents the contribution of the two generator sectors (residential and commercial) to the overall waste composition, and Table 3.3 provides the confidence intervals for the two sectors.

Provided below is a summary of key findings regarding the overall composition of Class I waste delivered to the Leon County Transfer Station:

- Seasonal Variation: As can be seen in Table 3.1, the most significant difference was in the
  amount of Other Compostable Paper, which increased from 3.9 percent in April to 13.1
  percent in September. Also worth noting is the somewhat higher percentage of Food Waste
  during September (12.4 percent) as compared to April (10.4 percent), as well as slightly
  higher percentages of Corrugated Cardboard (1.5 percent higher in September than in April)
  and Glass Food & Beverage Containers (1.2 percent higher in September than in April). This
  increase in the percentage of Other Compostable Paper, Food Waste, Corrugated
  Cardboard, and Glass Food & Beverage Containers during the September sampling event
  was likely the result of a Florida State University home football game the Saturday before
  the September sampling event and the increased scrutiny of sorting personnel resulting
  from the additional residue sub-categories.
- Recyclable Paper: Recyclable grades of paper constitute more than 15 percent of Class I waste delivered to the transfer station. This includes Corrugated Cardboard (5.8 percent),

Office Paper (2.9 percent), Newspaper (2.1 percent), and Other Recyclable Paper (4.6 percent).

- Recyclable Containers: Recyclable containers comprise approximately 13 percent of Class I waste delivered to the transfer station. Plastic Containers make up the largest component with 5.7 percent, while the heaviest container type, Glass Food & Beverage Containers, comprise 4.6 percent. Also included in recyclable containers are Tin/Steel Cans (1.1 percent), Aluminum Food & Beverage Containers (1.0 percent), and Aseptic Containers (0.5 percent).
- Organics: Organic wastes comprise approximately 14 percent of the Class I waste delivered to the transfer station. This includes Food Waste (11.4 percent) and Yard Waste (2.6 percent). The percentage of yard waste is relatively low since much of this material is collected as part of a separate residential curbside collection for yard waste.
- Other Material Categories: Of the other material categories, Other Compostable Paper (8.5 percent), Textiles (3.5 percent), and C&D Debris (2.4 percent) make up the largest percentages. Other Compostable Paper could be composted if an appropriate system were established. Textiles includes items such as clothing, towels, blankets, curtains, shoes, wallets, purses, belts, and the like, some of which could be diverted through re-use programs. C&D Debris includes any structural wood, building materials or associated items, some of which may be able to be recycled or re-used if separated.



Note: As described in Section 2.1 of this report, this chart reflects a further breakdown of the residue category into seven additional sub-categories based on percentages observed during the September sorting event.

|                                       | April 2011       | September 2011   | Combined         |
|---------------------------------------|------------------|------------------|------------------|
| Material Category                     | Weighted Average | Weighted Average | Weighted Average |
| 1 Glass Food & Beverage Containers    | 4.0%             | 5.2%             | 4.6%             |
| 2 Aluminum Food & Beverage Containers | 1.0%             | 1.1%             | 1.0%             |
| 3 Tin/Steel Cans                      | 1.0%             | 1.1%             | 1.1%             |
| 4 Other Ferrous Metals                | 0.5%             | 1.4%             | 0.9%             |
| 5 Other Non-Ferrous Metals            | 0.3%             | 0.6%             | 0.5%             |
| 6 Plastic Containers (Recyclable)     | 5.3%             | 6.1%             | 5.7%             |
| 7 Corrugated Cardboard                | 5.1%             | 6.6%             | 5.8%             |
| 8 Newspaper                           | 1.9%             | 2.4%             | 2.1%             |
| 9 Office Paper                        | 3.3%             | 2.5%             | 2.9%             |
| 10 Other Recyclable Paper             | 4.5%             | 4.7%             | 4.6%             |
| 11 Other Compostable Paper            | 3.9%             | 13.1%            | 8.5%             |
| 12 Aseptic Containers                 | 0.2%             | 0.8%             | 0.5%             |
| 13 Food Waste                         | 10.4%            | 12.4%            | 11.4%            |
| 14 Yard Waste                         | 2.8%             | 2.3%             | 2.6%             |
| 15 Electronics                        | 0.8%             | 1.1%             | 0.9%             |
| 16 Hazardous/Special Wastes           | 0.7%             | 0.8%             | 0.8%             |
| 17 Textiles                           | 3.6%             | 3.4%             | 3.5%             |
| 18 Carpet/ Padding                    | 0.2%             | 0.7%             | 0.4%             |
| 19 Furniture                          | 0.1%             | 0.5%             | 0.3%             |
| 20 C&D                                | 2.7%             | 2.0%             | 2.4%             |
| 21 Tires                              | 0.0%             | 0.1%             | 0.1%             |
| 22 Residue (All Other Materials)      | 47.8%            | 31.1%            | 39.5%            |
| TOTALS                                | 100.0%           | 100.0%           | 100.0%           |

# TABLE 3.1: COMPOSITION OF CLASS I WASTE DELIVERED TO LEON COUNTY TRANSFER STATION BY SORTING EVENT (% BY WEIGHT)

|                                       | Residential      | Commercial       | Combined         |
|---------------------------------------|------------------|------------------|------------------|
| Material Category                     | Weighted Average | Weighted Average | Weighted Average |
| 1 Glass Food & Beverage Containers    | 4.6%             | 4.6%             | 4.6%             |
| 2 Aluminum Food & Beverage Containers | 1.0%             | 1.0%             | 1.0%             |
| 3 Tin/Steel Cans                      | 1.4%             | 0.9%             | 1.1%             |
| 4 Other Ferrous Metals                | 1.1%             | 0.9%             | 0.9%             |
| 5 Other Non-Ferrous Metals            | 0.6%             | 0.4%             | 0.5%             |
| 6 Plastic Containers (Recyclable)     | 5.3%             | 5.9%             | 5.7%             |
| 7 Corrugated Cardboard                | 3.5%             | 7.1%             | 5.8%             |
| 8 Newspaper                           | 3.3%             | 1.5%             | 2.1%             |
| 9 Office Paper                        | 1.8%             | 3.5%             | 2.9%             |
| 10 Other Recyclable Paper             | 4.7%             | 4.5%             | 4.6%             |
| 11 Other Compostable Paper            | 8.0%             | 8.8%             | 8.5%             |
| 12 Aseptic Containers                 | 0.5%             | 0.5%             | 0.5%             |
| 13 Food Waste                         | 6.8%             | 13.9%            | 11.4%            |
| 14 Yard Waste                         | 3.5%             | 2.0%             | 2.6%             |
| 15 Electronics                        | 0.9%             | 1.0%             | 0.9%             |
| 16 Hazardous/Special Wastes           | 1.2%             | 0.5%             | 0.8%             |
| 17 Textiles                           | 4.5%             | 2.9%             | 3.5%             |
| 18 Carpet/ Padding                    | 0.8%             | 0.2%             | 0.4%             |
| 19 Furniture                          | 0.1%             | 0.4%             | 0.3%             |
| 20 C&D                                | 2.5%             | 2.3%             | 2.4%             |
| 21 Tires                              | 0.1%             | 0.0%             | 0.1%             |
| 22 Residue (All Other Materials)      | 43.8%            | 37.1%            | 39.5%            |
| TOTALS                                | 100.0%           | 100.0%           | 100.0%           |

# TABLE 3.2: COMPOSITION OF CLASS I WASTE DELIVERED TO LEON COUNTY TRANSFER STATION BY GENERATOR SECTOR (% BY WEIGHT)

# TABLE 3.3: COMPOSITION OF CLASS I WASTE DELIVERED TO LEON COUNTY TRANSFER STATION WITH 90 PERCENT CONFIDENCE INTERVALS (% BY WEIGHT)

|                                       | Commercial          |                 |                 |                     |                 |                 |  |
|---------------------------------------|---------------------|-----------------|-----------------|---------------------|-----------------|-----------------|--|
|                                       |                     | 90% Confider    | nce Interval    |                     | 90% Confider    | nce Interval    |  |
| Material Category                     | Weighted<br>Average | Lower<br>Bounds | Upper<br>Bounds | Weighted<br>Average | Lower<br>Bounds | Upper<br>Bounds |  |
| 1 Glass Food & Beverage Containers    | 4.6%                | 3.6%            | 5.5%            | 4.6%                | 3.3%            | 5.9%            |  |
| 2 Aluminum Food & Beverage Containers | 1.0%                | 0.8%            | 1.1%            | 1.0%                | 0.8%            | 1.3%            |  |
| 3 Tin/Steel Cans                      | 1.4%                | 1.2%            | 1.7%            | 0.9%                | 0.7%            | 1.1%            |  |
| 4 Other Ferrous Metals                | 1.1%                | 0.7%            | 1.4%            | 0.9%                | 0.5%            | 1.3%            |  |
| 5 Other Non-Ferrous Metals            | 0.6%                | 0.5%            | 0.8%            | 0.4%                | 0.3%            | 0.5%            |  |
| 6 Plastic Containers (Recyclable)     | 5.3%                | 4.7%            | 5.8%            | 5.9%                | 5.1%            | 6.7%            |  |
| 7 Corrugated Cardboard                | 3.5%                | 2.8%            | 4.3%            | 7.1%                | 6.0%            | 8.1%            |  |
| 8 Newspaper                           | 3.3%                | 2.0%            | 4.5%            | 1.5%                | 1.2%            | 1.8%            |  |
| 9 Office Paper                        | 1.8%                | 1.2%            | 2.3%            | 3.5%                | 2.4%            | 4.6%            |  |
| 10 Other Recyclable Paper             | 4.7%                | 4.0%            | 5.4%            | 4.5%                | 3.8%            | 5.2%            |  |
| 11 Other Compostable Paper            | 8.0%                | 6.3%            | 9.7%            | 8.8%                | 7.4%            | 10.1%           |  |
| 12 Aseptic Containers                 | 0.5%                | 0.4%            | 0.6%            | 0.5%                | 0.4%            | 0.7%            |  |
| 13 Food Waste                         | 6.8%                | 5.6%            | 8.1%            | 13.9%               | 11.1%           | 16.8%           |  |
| 14 Yard Waste                         | 3.5%                | 1.2%            | 5.9%            | 2.0%                | 1.2%            | 2.9%            |  |
| 15 Electronics                        | 0.9%                | 0.5%            | 1.2%            | 1.0%                | 0.5%            | 1.4%            |  |
| 16 Hazardous/Special Wastes           | 1.2%                | 0.7%            | 1.8%            | 0.5%                | 0.3%            | 0.7%            |  |
| 17 Textiles                           | 4.5%                | 3.9%            | 5.1%            | 2.9%                | 2.3%            | 3.6%            |  |
| 18 Carpet/ Padding                    | 0.8%                | 0.2%            | 1.4%            | 0.2%                | 0.1%            | 0.3%            |  |
| 19 Furniture                          | 0.1%                | 0.0%            | 0.2%            | 0.4%                | 0.1%            | 0.8%            |  |
| 20 C&D                                | 2.5%                | 1.2%            | 3.7%            | 2.3%                | 1.3%            | 3.3%            |  |
| 21 Tires                              | 0.1%                | 0.0%            | 0.1%            | 0.0%                | 0.0%            | 0.1%            |  |
| 22 Residue (All Other Materials)      | 43.8%               | 40.2%           | 47.5%           | 37.1%               | 34.1%           | 40.1%           |  |
| TOTALS                                | 100.0%              |                 |                 | 100.0%              |                 |                 |  |

# 3.2 Composition of Residential Waste Stream

Figure 3.2 depicts the composition of Class I waste disposed at the Leon County Transfer Station by residential customers, and Table 3.4 presents the April, September, and combined study results. Individual sample results for this generator sector are provided in Appendix B.

- Seasonal Variations: Comparison of the material category confidence intervals between the April and September sorting events reveals some variation in several material categories. The largest change was in the percentage of Other Compostable Paper, which increased from 3.1 percent during the April sort to 12.8 percent in the September sort. The percentages of Food Waste, Corrugated Cardboard and Other Recyclable Paper also increased from the April sort to the September sort by 2.9 percent, 1.5 percent, and 1.4 percent respectively. The increase in these materials during the September sampling event was likely the result of a Florida State University home football game the Saturday before the September sampling event and the increased scrutiny of sorting personnel resulting from the additional residue sub-categories.
- Recyclable Paper: Recyclable grades of paper comprise approximately 13 percent of Residential Class I waste delivered to the transfer station. Other Recyclable Paper (4.7 percent) comprises the largest component of recyclable paper, followed by Corrugated Cardboard (3.5 percent), Newspaper (3.4 percent), and Office Paper (1.8 percent).
- Recyclable Containers: Commingled containers comprise approximately 13 percent of Residential Class I waste delivered to the transfer station. Plastic Containers (5.3 percent) is the largest component, followed by Glass Food & Beverage Containers (4.6 percent), Tin/Steel Cans (1.4 percent), Aluminum Food & Beverage Containers (1.0 percent), and Aseptic Containers (0.5 percent).
- Organics: Organic wastes constitute just over 10 percent of Residential Class I waste delivered to the transfer station. This includes Food Waste (6.8 percent) and Yard Waste (3.5 percent).
- Other Material Categories: Of the other material categories, Other Compostable Paper (8.0 percent), Textiles (4.5 percent), and C&D Debris (2.5 percent) make up the largest percentages. Other Compostable Paper could be composted if an appropriate system were established. Textiles includes items such as clothing, towels, blankets, curtains, shoes, wallets, purses, belts, and the like, some of which could be diverted through reuse programs. C&D Debris includes any structural wood, building materials or associated items, some of which may be able to be recycled or re-used if separated.

# FIGURE 3.2: COMPOSITION OF RESIDENTIAL CLASS I WASTE DELIVERED TO LEON COUNTY TRANSFER STATION (% BY WEIGHT)



# TABLE 3.4: COMPOSITION OF RESIDENTIAL CLASS I WASTE DELIVERED TO LEON COUNTY TRANSFER STATION (% BY WEIGHT)

| April Event                           |                     | September Event |                 | Combined            |                 |                 |                     |                 |                 |
|---------------------------------------|---------------------|-----------------|-----------------|---------------------|-----------------|-----------------|---------------------|-----------------|-----------------|
|                                       |                     | 90% Confider    | ice Interval    | CHI DOTTAL          | 90% Confider    | ice Interval    |                     | 90% Confider    | ce Interval     |
| Material Category                     | Weighted<br>Average | Lower<br>Bounds | Upper<br>Bounds | Welghted<br>Average | Lower<br>Bounds | Upper<br>Bounds | Welghted<br>Average | Lower<br>Bounds | Upper<br>Bounds |
| 1 Glass Food & Beverage Containers    | 4.7%                | 3.4%            | 6.0%            | 4.5%                | 3.1%            | 6.0%            | 4.6%                | 3.6%            | 5.5%            |
| 2 Aluminum Food & Beverage Containers | 1.2%                | 0.9%            | 1.4%            | 0.8%                | 0.7%            | 1.0%            | 1.0%                | 0.8%            | 1.1%            |
| 3 Tin/Steel Cans                      | 1.3%                | 1.0%            | 1.7%            | 1.5%                | 1.1%            | 1.9%            | 1.4%                | 1.2%            | 1.7%            |
| 4 Other Ferrous Metals                | 0.5%                | 0.1%            | 0.9%            | 1.6%                | 1.0%            | 2.2%            | 1.1%                | 0.7%            | 1.5%            |
| 5 Other Non-Ferrous Metals            | 0.5%                | 0.3%            | 0.6%            | 0.7%                | 0.5%            | 1.0%            | 0.6%                | 0.5%            | 0.8%            |
| 6 Plastic Containers (Recyclable)     | 5.5%                | 4.7%            | 6.4%            | 5.1%                | 4.3%            | 5.8%            | 5.3%                | 4.7%            | 5.8%            |
| 7 Corrugated Cardboard                | 2.8%                | 1.8%            | 3.8%            | 4.3%                | 3.1%            | 5.5%            | 3.5%                | 2.9%            | 4.4%            |
| 8 Newspaper                           | 3.1%                | 0.9%            | 5.2%            | 3.5%                | 2.1%            | 5.0%            | 3.3%                | 2.1%            | 4.6%            |
| 9 Office Paper                        | 1.3%                | 0.7%            | 1.8%            | 2.2%                | 1.2%            | 3.3%            | 1.8%                | 1.3%            | 2.4%            |
| 10 Other Recyclable Paper             | 4.0%                | 3.0%            | 5.1%            | 5.4%                | 4.3%            | 6.4%            | 4.7%                | 4.0%            | 5.5%            |
| 11 Other Compostable Paper            | 3.1%                | 2.4%            | 3.9%            | 12.8%               | 10.8%           | 14.8%           | 8.0%                | 6.8%            | 10.2%           |
| 12 Aseptic Containers                 | 0.2%                | 0.1%            | 0.4%            | 0.7%                | 0.5%            | 0.9%            | 0.5%                | 0.4%            | 0.6%            |
| 13 Food Waste                         | 6.3%                | 4.4%            | 8.2%            | 7.3%                | 5.5%            | 9.2%            | 6.8%                | 5.6%            | 8.2%            |
| 14 Yard Waste                         | 4.2%                | 0.0%            | 8.7%            | 2.9%                | 1.1%            | 4.7%            | 3.5%                | 1.1%            | 5.8%            |
| 15 Electronics                        | 0.7%                | 0.1%            | 1.3%            | 1.1%                | 0.7%            | 1.5%            | 0.9%                | 0.6%            | 1.3%            |
| 16 Hazardous/Special Wastes           | 1.1%                | 0.1%            | 2.1%            | 1.3%                | 0.7%            | 1.9%            | 1.2%                | 0.7%            | 1.8%            |
| 17 Textiles                           | 4.1%                | 3.2%            | 5.1%            | 4.9%                | 3.9%            | 5.8%            | 4.5%                | 3.9%            | 5.2%            |
| 18 Carpet/ Padding                    | 0.2%                | 0.0%            | 0.4%            | 1.4%                | 0.3%            | 2.6%            | 0.8%                | 0.3%            | 1.5%            |
| 19 Furniture                          | 0.1%                | 0.0%            | 0.1%            | 0.2%                | 0.0%            | 0.4%            | 0.1%                | 0.0%            | 0.2%            |
| 20 C&D                                | 2.4%                | 1.2%            | 3.5%            | 2.5%                | 0.1%            | 5.0%            | 2.5%                | 1.2%            | 3.8%            |
| 21 Tires                              | 0.0%                | 0.0%            | 0.0%            | 0.2%                | 0.0%            | 0.3%            | 0.1%                | 0.0%            | 0.1%            |
| 22 Residue (All Other Materials)      | 52.7%               | 48.4%           | 57.0%           | 35.0%               | 32.1%           | 37.8%           | 43.8%               | 39.2%           | 46.5%           |
| TOTALS                                | 100.0%              |                 |                 | 100.0%              |                 |                 | 100.0%              |                 |                 |

# 3.3 Composition of Commercial Waste Stream

Figure 3.3 presents the composition of Class I waste disposed at the Leon County Transfer Station by the commercial sector. Table 3.5 presents the study results for the two sampling events as well as combined data, for commercial waste. Individual sample results for this generator sector are provided in Appendix B.

- Seasonal Variations: Comparison of the material category confidence intervals between the April and September sorting events reveals some variation in several material categories. The most significant difference was in the amount of Other Compostable Paper, which increased from 4.3 percent in April to 13.3 percent in September. Also worth noting is the somewhat higher percentage of Food Waste during September (15.4 percent) as compared to April (12.4 percent), as well as slightly higher percentages of Glass Food & Beverage Containers (2.0 percent higher in September than in April) and Corrugated Cardboard (1.7 percent higher in September than in April). The increase in these materials during the September sampling event was likely the result of a Florida State University home football game the Saturday before the September sampling event and the increased scrutiny of sorting personnel resulting from the additional residue sub-categories.
- Recyclable Paper: Recyclable grades of paper comprise more than 16 percent of Commercial Class I waste delivered to the transfer station. The largest category is Corrugated Cardboard (7.1 percent), followed by Other Recyclable Paper (4.5 percent), Office Paper (3.5 percent) and Newspaper (1.5 percent).
- Recyclable Containers: Recyclable containers make up approximately 13 percent of Commercial Class I waste delivered to the transfer station. Plastic Containers (5.9 percent) constitute the largest component, followed by Glass Food & Beverage Containers (4.6 percent), Aluminum Food & Beverage Containers (1.0 percent), Tin/Steel Cans (0.9 percent), and Aseptic Containers (0.5 percent).
- Organics: Organic wastes comprise approximately 16 percent of Commercial Class I waste delivered to the transfer station. As expected, this is made up primarily of Food Waste (13.9 percent), with a small amount of Yard Waste (2.0 percent).
- Other Material Categories: Of the other material categories, Other Compostable Paper (8.8 percent), Textiles (2.9 percent), and C&D Debris (2.3 percent) make up the largest percentages. Other Compostable Paper could be composted if an appropriate system were established. Textiles includes items such as clothing, towels, blankets, curtains, shoes, wallets, purses, belts, and the like, some of which could be diverted through reuse programs. C&D Debris includes any structural wood, building materials or associated items, some of which may be able to be recycled or re-used if separated.

# FIGURE 3.3: COMPOSITION OF COMMERCIAL CLASS I WASTE DELIVERED TO LEON COUNTY TRANSFER STATION (% BY WEIGHT)



# TABLE 3.5: COMPOSITION OF COMMERCIAL CLASS I WASTE DELIVERED TO LEON COUNTY TRANSFER STATION (% BY WEIGHT)

|    |                                     | April Event         |                 | Se              | September Event     |                 |                 | Combined            |                 |                 |
|----|-------------------------------------|---------------------|-----------------|-----------------|---------------------|-----------------|-----------------|---------------------|-----------------|-----------------|
|    |                                     | 1                   | 90% Confider    | nce Interval    | 1                   | 90% Confider    | ce Interval     |                     | 90% Confider    | nce Interval    |
|    | Material Category                   | Weighted<br>Average | Lower<br>Bounds | Upper<br>Bounds | Weighted<br>Average | Lower<br>Bounds | Upper<br>Bounds | Weighted<br>Average | Lower<br>Bounds | Upper<br>Bounds |
| 1  | Glass Food & Beverage Containers    | 3.6%                | 2.2%            | 5.0%            | 5.6%                | 3.4%            | 7.8%            | 4.6%                | 3.3%            | 5.9%            |
| 2  | Aluminum Food & Beverage Containers | 0.8%                | 0.6%            | 1.1%            | 1.2%                | 0.8%            | 1.7%            | 1.0%                | 0.8%            | 1.3%            |
| 3  | Tin/Steel Cans                      | 0.9%                | 0.6%            | 1.1%            | 0.9%                | 0.7%            | 1.1%            | 0.9%                | 0.7%            | 1.1%            |
| 4  | Other Ferrous Metals                | 0.4%                | 0.2%            | 0.6%            | 1.3%                | 0.6%            | 2.1%            | 0.9%                | 0.5%            | 1.3%            |
| 5  | Other Non-Ferrous Metals            | 0.2%                | 0.1%            | 0,3%            | 0.5%                | 0.4%            | 0.7%            | 0.4%                | 0.3%            | 0.5%            |
| 6  | Plastic Containers (Recyclable)     | 5.1%                | 4.0%            | 6.3%            | 6.7%                | 5.6%            | 7.8%            | 5.9%                | 5.2%            | 6.7%            |
| 7  | Corrugated Cardboard                | 6.2%                | 4.7%            | 7.7%            | 7.9%                | 6.4%            | 9.5%            | 7.1%                | 6.0%            | 8.2%            |
| 8  | Newspaper                           | 1.3%                | 1.0%            | 1.7%            | 1.7%                | 1.2%            | 2.2%            | 1.5%                | 1.2%            | 1.8%            |
| 9  | Office Paper                        | 4,3%                | 2.4%            | 6.1%            | 2.7%                | 1.5%            | 3.8%            | 3.5%                | 2.3%            | 4.6%            |
| 10 | Other Recyclable Paper              | 4.7%                | 3.8%            | 5.7%            | 4.3%                | 3.1%            | 5.5%            | 4.5%                | 3.8%            | 5.2%            |
| 11 | Other Compostable Paper             | 4.3%                | 3.5%            | 5.1%            | 13.3%               | 11.5%           | 15.0%           | 8.8%                | 7.6%            | 10.3%           |
| 12 | Aseptic Containers                  | 0.2%                | 0.1%            | 0.3%            | 0.8%                | 0.5%            | 1.1%            | 0.5%                | 0.4%            | 0.7%            |
| 13 | Food Waste                          | 12.4%               | 7.9%            | 17.0%           | 15.4%               | 11.7%           | 19.1%           | 13.9%               | 11.1%           | 16.8%           |
| 14 | Yard Waste                          | 2.1%                | 1.0%            | 3.2%            | 2.0%                | 0.8%            | 3.2%            | 2.0%                | 1.2%            | 2.9%            |
| 15 | Electronics                         | 0.9%                | 0.3%            | 1.4%            | 1.1%                | 0.4%            | 1.7%            | 1.0%                | 0.5%            | 1.4%            |
| 16 | Hazardous/Special Wastes            | 0.5%                | 0.3%            | 0.7%            | 0.5%                | 0.2%            | 0.8%            | 0.5%                | 0.3%            | 0.7%            |
| 17 | Textiles                            | 3.4%                | 2.3%            | 4.4%            | 2.5%                | 1.9%            | 3.2%            | 2.9%                | 2.3%            | 3.6%            |
| 18 | Carpet/ Padding                     | 0.2%                | 0.0%            | 0.4%            | 0.2%                | 0.0%            | 0.3%            | 0.2%                | 0.1%            | 0.3%            |
| 19 | Furniture                           | 0.1%                | 0.0%            | 0.4%            | 0.8%                | 0.2%            | 1,3%            | 0.4%                | 0.1%            | 0.8%            |
| 20 | C&D                                 | 2.9%                | 1.1%            | 4.7%            | 1.7%                | 0.8%            | 2.6%            | 2.3%                | 1.3%            | 3.3%            |
| 21 | Tires                               | 0.0%                | 0.0%            | 0.0%            | 0.1%                | 0.0%            | 0.2%            | 0.0%                | 0.0%            | 0.1%            |
| 22 | Residue (All Other Materials)       | 45.4%               | 40.6%           | 50.1%           | 28.9%               | 26.4%           | 31.4%           | 37.1%               | 33.8%           | 39.8%           |
|    | TOTALS                              | 100.0%              |                 |                 | 100.0%              |                 |                 | 100.0%              |                 |                 |

# 3.4 Additional Data

Appendix B presents additional tables and figures depicting the composition of the overall Class I waste stream from the April and September sorting events. All results are expressed in percentage by weight. Data are presented in two ways for the waste stream as a whole and for each waste generating sector:

- A detailed table lists the full composition and quantity results for each individual sample; and
- A pie chart presents an overview of waste composition by material category.

For the residential sector, HDR has provided separate data and charts representing characteristics of the multi-family samples sorted, and the same for Rural Waste Service Center samples sorted during the April and September sampling events. For the commercial sector, HDR has provided separate data and charts representing the characteristics of samples originating from the two area universities, Florida State University and Florida A&M University. To the extent possible, HDR identified and sampled commercial loads specifically originating from these universities in order to obtain anecdotal data on the composition of waste generated by these institutional customers.

During the September sampling event, HDR further classified the residue category into seven additional sub-categories in order to provide the County with a greater level of understanding of the items contained in the residue material category. The results of this analysis are also included at the end of Appendix B.

Appendix A: Sampling & Sorting Plan

# Leon County Waste Audit Sampling & Sorting Plan

### 1.0 INTRODUCTION

The 2011 Leon County Waste Audit will analyze the composition of residential, commercial and institutional Class I waste delivered to the Leon County Transfer Station. The objectives of the waste audit are to:

- Assist the County in identifying targets of opportunity that will allow it to move towards the State's recently enacted 75 percent recycling goal;
- Assist the County in developing future solid waste programs, including more focused and cost-effective resource management and recycling programs; and
- Assist the County in providing more accurate data for state reporting purposes.

# 2.0 GENERAL SORT LOGISTICS

#### 2.1 Location

The Leon County Waste Audit will be conducted at the Leon County Transfer Station. Sampling will be conducted over the course of two, one-week sorting events (Monday through Friday). The first sort will occur April 18 - April 22, 2011. The second sort will take place during August 2011 (exact dates to be determined).

The County will provide adequate floor space (approximately 1500 sq. feet) within the transfer station for all sorting activities. The County will also provide a loader or bobcat, and equipment operator, to work with the HDR Field Supervisor to obtain the samples needed. Sorted samples will be discarded near the sorting area for removal by transfer station staff.

The Leon County Transfer Station includes space for parking vehicles of the sorting crew. It also includes restrooms and a break room that the sorting crew can use as needed.

#### 2.2 Sorting Area

Four sorting tables will be set up to accommodate two sorters per table. Each table will be equipped with sorting tongs, a hand rake, scissors (to open plastic bags) and sorting bins. There will also be one table dedicated to observing, weighing and logging sample data.

# 2.3 Sorters

The sorting of all samples will be done by two sorting crews, each made up of four temporary workers. All field work will be managed by an HDR Field Supervisor and an HDR Crew Chief. The Field Supervisor will be responsible for obtaining the samples to be sorted and the Crew Chief will oversee the sorting, weighing and record-keeping processes.

# 2.4 Duration

Both the April and August sorting events are scheduled to take place over five, 10-hour sorting days (Monday-Friday). The first sort will occur April 18 - April 22, 2011. The second sort will take place during August 2011 (exact dates to be determined).

This schedule is based on the sampling needs identified by HDR and the Leon County Solid Waste Management Division. It assumes that approximately ten to twelve 200-300 pound samples can be sorted in one 10-hour day by the two sorting crews. A minimum of 50 samples are targeted for sorting during each event.

It is expected that the first half-day of each sorting event will include:

- Equipment set up;
- Sorting crew debrief and safety training; and
- Getting familiar with tipping and sampling at the Leon County Transfer Station.

It is also expected that the last afternoon of each sorting event will include:

- Equipment break down;
- · Cleaning of sorting equipment and supplies; and
- Cleaning of the sorting area.

# 2.5 Equipment

| ITEM                | NUMBER | SOURCE        | COMMENTS                                         |
|---------------------|--------|---------------|--------------------------------------------------|
| Sorting Tables      | 2      | Build         |                                                  |
| Folding Table       | 1      | County        | Used for recording data                          |
| Folding Chairs      | 8      | County        |                                                  |
| Sorting Bins        | 50     | County        | 18-32 gallon                                     |
| Loader & Driver     | 1      | County        |                                                  |
| 8' x 8' Tarps       | 4      | Purchase      | Used to cover samples if wet                     |
| 10' x 20' Tarps     | 6      | Purchase      | Used to place samples on<br>near sort area       |
| Bungee Cords        | 8      | Purchase      | 2 per table                                      |
| Scale (full sample) | 1      | Rent/Purchase | Capacity of up to 300 lbs;<br>accurate to 0.1 lb |

# TABLE 1 - EQUIPMENT LIST

| 2         | Rent/Purchase                                                                                                                                             | Accurate to 0.1 lb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2         | Purchase                                                                                                                                                  | 1 per sorting crew                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 8         | Purchase                                                                                                                                                  | 1 per sorter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4         | Purchase                                                                                                                                                  | 1 per table                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4         | Purchase                                                                                                                                                  | 1 per table                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2         | Purchase                                                                                                                                                  | 1 per sorting crew                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2         | Purchase                                                                                                                                                  | 1 per sorting crew                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2         | Purchase                                                                                                                                                  | 1 per sorting crew                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2         | Purchase                                                                                                                                                  | 1 per sorting crew                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1         | Purchase                                                                                                                                                  | For 20 people                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1         | Purchase                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| TBD       | County                                                                                                                                                    | Based on size and layout of<br>sorting area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 20        | Purchase                                                                                                                                                  | 2 per crew member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 500       | Purchase                                                                                                                                                  | 5 per crew member per day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 100       | Purchase                                                                                                                                                  | 1 per crew member per day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4         | MDT to furnish for day<br>laborers; Purchase for<br>HDR team members                                                                                      | With splash guards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4         | MDT to furnish for day<br>laborers; Purchase for<br>HDR team members                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4         | MDT to furnish for day<br>laborers; Purchase for<br>HDR team members                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 100       | Purchase                                                                                                                                                  | 5 per crew member per event                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 100 pairs | Purchase                                                                                                                                                  | 5 pairs per crew member per<br>event                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 4         | Purchase                                                                                                                                                  | 2 containers per event                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2         | D I                                                                                                                                                       | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 12        | Purchase                                                                                                                                                  | 5-gallon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|           | 2<br>2<br>8<br>4<br>4<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>1<br>1<br>1<br>TBD<br>20<br>500<br>100<br>4<br>4<br>4<br>4<br>4<br>4<br>100<br>100 pairs<br>4 | 2Rent/Purchase2Purchase8Purchase4Purchase4Purchase2Purchase2Purchase2Purchase2Purchase2Purchase1Purchase1Purchase1Purchase1Purchase1Purchase100Purchase20Purchase500Purchase100Purchase100Purchase4MDT to furnish for day<br>laborers; Purchase for<br>HDR team members4MDT to furnish for day<br>laborers; Purchase for<br>HDR team members4MDT to furnish for day<br>laborers; Purchase for<br>HDR team members4Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase100Purchase |

# 2.6 Safety Considerations

To ensure the health and safety of the sorting crews involved in the waste audit, a number of preventative measures will be taken. The following personal protective equipment (PPE) will be used by all members of the sorting crews:

- Hard bottomed, non-slip, steel toe boots;
- Tyvek or equivalent, disposable coveralls;
- Safety vests;

- Hard hat;
- Inner latex gloves;
- Outer rubber cut and puncture resistant gloves;
- Safety glasses (clear plastic);
- Dust masks; and
- Earplugs.

Safety features provided at the site will include:

- Portable emergency eyewash kit;
- First aid kit;
- Water; and
- Access to rest room facilities.

The following safety procedures will be followed:

- Do not open any containers;
- Do not touch syringes or suspicious materials (including any materials with red staining, containers taped together, or an unusual amount of ammonia bottles, cold capsules or similar container; these items may indicate methamphetamine paraphernalia) - move these materials to hazardous/special waste container using shovel (preferred) or hand tools;
- Do not touch other potentially hazardous materials move these materials to hazardous/special waste container using shovel (preferred) or hand tools;
- Manage all waste with tongs or hand rakes;
- Work from tables instead of ground;
- Stay inside the sorting area designated by safety cones (away from heavy equipment operation);
- Take rest and refreshment breaks as needed; and
- No drinking or eating in the sorting area.

# 3.0 SAMPLE SELECTION

Sample selection will be determined by the HDR Team in advance of the waste audit. Table 2 includes a summary of the sectors that will be targeted.

| SECTOR      | DESCRIPTION                                                   |
|-------------|---------------------------------------------------------------|
| Residential | Single-family, Multi-family, Rural Waste Service Centers      |
|             | Grocery, Hospitality, Large Retail, Small Office, University, |
| Commercial  | Government, Hospital                                          |

# TABLE 2 - SUMMARY OF TARGETED SECTORS

To the extent possible, the HDR Team will identify and sample several commercial loads

specifically originating from area universities and government buildings in order to obtain anecdotal data on the composition of waste generated specifically by these institutional customers.

Tables 3 and 4 include the number of targeted loads to be sampled during each sampling event. This breakdown is based on the need to obtain representative samples from each of the targeted waste generating sectors.

| SECTOR      | APRIL<br>SORTING EVENT | AUGUST<br>SORTING EVENT | TOTAL |
|-------------|------------------------|-------------------------|-------|
| Residential | 16                     | 16                      | 32    |
| Commercial  | 34                     | 34                      | 68    |
| TOTAL       | 50                     | 50                      | 100   |

# TABLE 3 - TARGETED NUMBER OF LOADS BY SECTOR

### TABLE 4 - PLANNED SAMPLES BY SECTOR & VEHICLE TYPE FOR EACH SAMPLING EVENT

| SECTOR                                | VEHICLE TYPE | NUMBER OF SAMPLES |
|---------------------------------------|--------------|-------------------|
| Residential                           |              |                   |
|                                       | Front-load   | 8                 |
|                                       | Rear-load    | 5                 |
| · · · · · · · · · · · · · · · · · · · | Side-load    | 2                 |
|                                       | Roll-off     | 1                 |
| TOTAL                                 |              | 16                |
| Commercial                            |              |                   |
|                                       | Roll-off     | 18                |
|                                       | Front-load   | 13                |
|                                       | Rear-load    | 3                 |
| TOTAL                                 |              | 34                |

Revisions to sample collections may be made in the field, depending on sample weights obtained and the ability to obtain samples as identified in Table 4.

# 4.0 MATERIALS TO BE SORTED

The materials selected for sorting during the waste audit are identified in Table 5. Approximately 21 materials will be sorted. These materials fall into the general categories of glass, metal, plastics, paper, organics, hazardous/special wastes, other and residue.

| MATERIAL TYPE                             | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | (include each material in sorting unless noted)                                                                                                                                                                                                                                                                                                                                                              |
|                                           | GLASS                                                                                                                                                                                                                                                                                                                                                                                                        |
| Glass Food &<br>Beverage<br>Containers    | All colors of food and beverage bottles and jars.                                                                                                                                                                                                                                                                                                                                                            |
|                                           | METAL                                                                                                                                                                                                                                                                                                                                                                                                        |
| Aluminum Food &<br>Beverage<br>Containers | Any food or beverage container made mainly of aluminum. Examples<br>include aluminum soda or beer cans, and some pet food cans. This type<br>does not include bimetal containers with steel sides and aluminum ends.                                                                                                                                                                                         |
| Tin/Steel Cans                            | Rigid containers made mainly of steel. These items will stick to a magnet<br>and may be tin-coated. Used to store food, beverages, paint, and a variety<br>of other household and consumer products. Examples include canned food<br>and beverage containers, empty metal paint cans, empty spray paint and<br>other aerosol containers, and bimetal containers with steel sides and<br>aluminum ends.       |
| Other Ferrous<br>Metals                   | Steel, clothes hangers, sheet metal products, pipes, miscellaneous metal scraps, and other magnetic metal items.                                                                                                                                                                                                                                                                                             |
| Other Non-Ferrous<br>Metals               | Scrap aluminum, aluminum foil, copper wiring and tubing, brass fixtures, and other non-magnetic metal.                                                                                                                                                                                                                                                                                                       |
|                                           | PLASTICS                                                                                                                                                                                                                                                                                                                                                                                                     |
| Plastic Containers                        | Plastic bottles, jars, tubs, and other containers marked with #1-7 in the triangular recycling symbol. Excludes expanded polystyrene (i.e., Styrofoam).                                                                                                                                                                                                                                                      |
|                                           | PAPER                                                                                                                                                                                                                                                                                                                                                                                                        |
| Corrugated<br>Cardboard                   | Typically has three layers. The center wavy layer is sandwiched between<br>the two outer layers. It does not have any wax coating on the inside or<br>outside. Examples include entire cardboard containers, such as shipping<br>and moving boxes, computer packaging cartons, and sheets and pieces of<br>boxes and cartons. This type does not include chipboard boxes such as<br>cereal and tissue boxes. |
| Newspaper                                 | Paper used in newspapers. Examples include newspaper and glossy inserts found in newspapers, and all items made from newsprint, such as free                                                                                                                                                                                                                                                                 |

# TABLE 5 - MATERIAL CATEGORIES & DESCRIPTIONS

| MATERIAL TYPE                        | DESCRIPTION<br>(include each material in sorting unless noted)                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (3)-0                                | advertising guides, election guides, and tax instruction booklets.                                                                                                                                                                                                                                                                                                                                                    |
| Office Paper                         | Printed or unprinted paper typically generated in an office environment including white, colored, coated and uncoated papers, manila and pastel colored file folders.                                                                                                                                                                                                                                                 |
| Other Recyclable<br>Paper            | All magazines, catalogs, paperboard, chipboard, brown paper bags, and other printed material on glossy and non-glossy paper.                                                                                                                                                                                                                                                                                          |
| Other Compostable<br>Paper           | Food-soiled paper, tissue, and waxed cardboard. It does not include paper<br>that is combined with plastic (e.g., to-go hot beverage cups) or other non-<br>paper materials.                                                                                                                                                                                                                                          |
| Aseptic Containers                   | Gable top milk and juice cartons, juice boxes and pouches, and other similar containers.                                                                                                                                                                                                                                                                                                                              |
|                                      | ORGANICS                                                                                                                                                                                                                                                                                                                                                                                                              |
| Food Waste                           | Food wastes and scraps including bone, rinds, etc. Includes coffee grinds<br>and tea bags. Excludes the weight of food containers, except when<br>container weight is not appreciable compared to the food inside.<br>Biodegradable packaging peanuts (made from corn starch) are also<br>included in this category. Fats, oils, and grease are included in this material<br>type.                                    |
| Yard Waste                           | Tree, shrub and brush prunings, household bedding plants, weeds, leaves, grass clippings, and other landscaping and gardening wastes. No dirt or soil.                                                                                                                                                                                                                                                                |
|                                      | HAZARDOUS/SPECIAL WASTES                                                                                                                                                                                                                                                                                                                                                                                              |
| Electronics                          | Cell phones, stereos, radios, tape decks, VCR or DVD players, camcorders,<br>microwaves, and digital cameras that have a circuit board; computer<br>monitors and television monitors with or without cathode ray tubes (CRTs)<br>and other computer items such as processors, mice, keyboards, disk drives,<br>laptops, and other video display without CRT's.                                                        |
| Other<br>Hazardous/Special<br>Wastes | Antifreeze, batteries, pool chemicals, solvents, fluorescent light bulbs,<br>pesticides, herbicides, cleaners, adhesives, glues, explosives, asbestos, latex<br>and oil-based paint, aerosol containers with product, medicines, cosmetics,<br>other household chemicals, gasoline, kerosene, fuels, medical/biohazard<br>waste, and other hazardous or difficult to manage materials (requires<br>special handling). |
|                                      | OTHER                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Textiles                             | Clothing, rags, towels, leather, blankets, curtains, shoes, wallets, purses, belts, and scrap leather.                                                                                                                                                                                                                                                                                                                |
| Carpet/Padding                       | Flooring applications consisting of various natural or synthetic fibers<br>bonded to some type of backing material. Also includes rubber, foam, felt,<br>or other material used under carpet to provide insulation and padding.                                                                                                                                                                                       |
| Furniture                            | Furniture, mattresses, and box springs.                                                                                                                                                                                                                                                                                                                                                                               |
| C&D                                  | Construction and demolition debris that includes rock, concrete, brick, drywall, insulation, fiberglass, roofing materials, treated and untreated                                                                                                                                                                                                                                                                     |

| MATERIAL TYPE | DESCRIPTION<br>(include each material in sorting unless noted)                         |
|---------------|----------------------------------------------------------------------------------------|
|               | lumber (including pallets), ceramics other than glassware, sawdust, and scrap debris . |
| Tires         | Small and large tires                                                                  |
|               | RESIDUE                                                                                |
| Residue       | Sand, soil, dirt, mixed fines, and materials not classified elsewhere                  |

# 5.0 GENERAL SORTING PROTOCOL

# 5.1 Load Selection

Each sorting event will span five weekdays and involve the capture and sampling of waste from three sectors: residential, commercial and institutional. Vehicles will be selected for sampling based on a systematic approach, which will consist of taking every "nth" vehicle that enters the facility after a randomly selected start time. The sampling intervals (*n*) will be determined by dividing the day's expected number of arriving vehicles from each waste generating sector by the number of samples needed on that day. The expected number of arriving vehicles will be based on historical scale house transaction data. Numbers of incoming vehicles will be selected by the HDR Field Supervisor and/or the scale house attendant using Vehicle Selection Sheets. When a vehicle is selected for sampling, the attendant will place a Sample Placard containing the date and Sample ID on that vehicle's windshield or ask the driver to place it on the vehicle dashboard.

# 5.2 Sampling Procedures

The selected loads of waste will be dumped in elongated piles, typically five to seven feet high. From each selected load, a sample will be selected using an imaginary 16-cell grid superimposed over the dumped material.

# Figure 1. 16-Cell Grid for Sampling



The HDR Field Supervisor will identify the randomly-selected cell to be extracted from each load. A sample of waste weighing between 200-300 pounds will be obtained from the selected cell and transported to the sorting area by the LCTS loader driver.

Each sample will be placed on a clean tarp and weighed. The HDR Field Supervisor will record the date, sample ID, and net weight of each sample on the appropriate Sample Placard and use the completed placard to label the sample. The Field Supervisor will also complete the top portion of the Field Data Sheet (see Table 6) including:

- Date;
- Sample ID;
- Route information;
- Visual notes; and
- Weather information.

# 5.3 Sorting Procedures

Materials will be sorted by manual separation and measurement, supported by visual observation. Manual sorting will be conducted on samples taken from each selected load.

- Workers will move bagged and loose waste to the sorting tables, opening each bag with a cutting tool. Once the contents are emptied onto the table, empty garbage bags shall be placed in the residue bin for the sample so as to be included in subsequent observation and weighing.
- Each table will have empty bins for sorting each of the materials identified in Table 5. Only
  one material will be placed in each bin. Tare weights for the bins will be recorded by the
  HDR Crew Chief prior to the start of each day's sorting activities.

- 3. All workers will wear PPE (as described in Section 2.6) while in the sort area, and will work solely from tables (versus the ground). The use of tongs or hand rakes for sorting will be encouraged. Closed or sealed containers will not be opened<sup>1</sup>. Any suspicious, potentially dangerous or hazardous materials will not be touched directly, but moved to the hazardous/special waste bin with shovel (preferred) or hand tools for subsequent observations and weighing.
- 4. The HDR Crew Chief will be available during the sorting process to answer questions regarding material classifications and sorting procedures. Any questionable material will be placed in a designated container for "unknowns" and the HDR Crew Chief will make a determination about their sorting.
- 5. Each table will work on only one sample at a time.
- 6. When each bin is full (or the sample is finished), the bin will be weighed by the HDR Crew Chief. Any visual observations made by the sorters will be brought to the attention of the HDR Crew Chief at that time.
- Once weighed, the bins will be emptied in a designated location for removal from the sort area by transfer station staff.
- 8. Once each sample has been fully sorted, the HDR Crew Chief will oversee the collection and measurement of any sample residue from tables and sample tarps (if any) and from the area around the sort tables. (Residue will typically include no discernable sort materials or materials that cannot be sorted due to moisture, small size or inability to identify).
- At the end of the sorting event the sorting area will be returned to its original condition. No waste materials will be left in the sort area unless authorized by transfer station staff.

During each sorting event, the HDR Field Supervisor and Crew Chief will confirm all visual observations and take photographs as appropriate, of key loads, samples and materials including:

- Collection vehicle loads once tipped but before they are sampled;
- Subcategories on material list (such as types of organics or paper); and
- Questionable materials (such as potentially hazardous waste) and final residue.

<sup>&</sup>lt;sup>1</sup> However, in those cases where food or beverage containers include liquids or foods that notably increase the weight of the container itself, the fill level will be observed. As appropriate, the average fill level of multiple containers weighed at one time will be noted on the Field Data Sheet for that sample.

# TABLE 6 - FIELD DATA SHEET

| Date:                                                                                                          |                                   |              |                   | Sample ID: |              |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------|-------------------|------------|--------------|
| ROUTE INFORM                                                                                                   | ATION:                            |              |                   |            |              |
| Waste Secto                                                                                                    | or (circle one):                  | Type of Vehi | cle (circle one): |            | Other:       |
| Resid                                                                                                          | lential                           | Re           | ar-load           | N          | lulti-Family |
| Comn                                                                                                           | nercial                           | Fre          | ont-load          |            | FSU          |
|                                                                                                                |                                   | Sie          | de-load           |            | FAMU         |
|                                                                                                                |                                   | R            | oll-off           | rth, E2    | Capitol      |
| VISUAL LOAD O                                                                                                  | BSERVATION:                       |              |                   |            |              |
| WEATHER INFO                                                                                                   | RMATION:                          |              |                   |            |              |
| Molsture:                                                                                                      |                                   | Wind:        |                   | Other:     |              |
| MATERIALECON                                                                                                   | OSITION                           |              |                   | 1          |              |
| WATERIALS CONT                                                                                                 |                                   | Weight       | Observations      | Weight     | Observation  |
| GLASS                                                                                                          | Glass Food & Bevera<br>Containers | ge           | Costinutions      | to cibit   | 000000000    |
|                                                                                                                | Aluminum<br>Food & Beverage       |              |                   |            |              |
|                                                                                                                | Containers                        |              |                   | -          |              |
| VIETAL                                                                                                         | Other Correys Motel               |              |                   | -          |              |
|                                                                                                                | Other Perrous Weta                | 5            |                   | -          |              |
|                                                                                                                | Metals                            |              |                   |            |              |
| PLASTICS                                                                                                       | Plastic Containers                |              |                   |            |              |
|                                                                                                                | Corrugated Cardboa                | rd           |                   |            |              |
|                                                                                                                | Newspaper                         |              |                   |            |              |
|                                                                                                                | Office Paper                      |              |                   |            |              |
| ADER                                                                                                           | Other Recyclable                  |              |                   |            |              |
|                                                                                                                | Paper                             |              |                   |            |              |
|                                                                                                                | Other Compostable                 |              |                   |            |              |
|                                                                                                                | Paper                             | -            |                   |            |              |
|                                                                                                                | Aseptic Containers                | ++           |                   |            |              |
| ORGANICS                                                                                                       | Food Waste                        | -            |                   |            |              |
|                                                                                                                | Flasteria                         |              |                   | _          |              |
|                                                                                                                | Electronics                       |              |                   |            |              |
| SPECIAL WASTE                                                                                                  | Hazardous/Special<br>Wastes       |              |                   |            |              |
|                                                                                                                | Textiles                          |              |                   |            |              |
|                                                                                                                | Carpet/ Padding                   |              |                   |            |              |
| OTHER                                                                                                          | Furniture                         |              |                   |            |              |
|                                                                                                                | C&D                               | - 1 12       |                   |            |              |
| the second s | Tires                             |              |                   |            |              |
| RESIDUE                                                                                                        | All Other Materials               |              |                   |            |              |

# 6.0 ANALYSIS OF RESULTS

Following the April and August sorting events, the HDR Team will analyze the data collected to determine:

- The composition of each sample;
- The aggregate composition of waste generated from the residential, commercial and institutional sectors; and
- Overall interpretation of the results.

HDR will develop a summary report of the findings including tabulated and charted annualized percentages of recyclable materials by type and generator sector. The report will also include all raw data collected during each sorting event.



Appendix B: Sampling Data

#### INDIVIDUAL SAMPLE RESULTS - ALL SECTORS APRIL 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Amonte   | Sample R | Ghas food B<br>Beerings Containers | Alumiaum Food &<br>Beverage Containers | Tin/Steel-Cans | Other Ferrous Metab | Other Non-Ferrous<br>Metals | Plastic Containers | Corruptive<br>Cardboard | Newspaper | Office Peper | Other Racyclable<br>Paper | Other Composiable<br>Paper | Auspuls Containers | Food Wasta | Yard Wasta | Electronica | Hamindoury/Speedad<br>Wattes | Textiles | Carpet/ Pedding | Pumbura | Clip  | P.   | All Other Materiats | Total |
|----------|----------|------------------------------------|----------------------------------------|----------------|---------------------|-----------------------------|--------------------|-------------------------|-----------|--------------|---------------------------|----------------------------|--------------------|------------|------------|-------------|------------------------------|----------|-----------------|---------|-------|------|---------------------|-------|
| APR      | 1        | 1.6%                               | 0.4%                                   | 0.5%           | 0,4%                | 0.0%                        | 7.0%               | 0.9%                    | 3.4%      | 20.7%        | 2.1%                      | 8.1%                       | 0.1%               | 1.5%       | 0.0%       | 0.7%        | 0.8%                         | 8.1%     | 0.0%            | 4.5%    | 0.7%  | 0.0% | 37.9%               | 100%  |
| APR      | 2        | 12,8%                              | 2.7%                                   | 0.9%           | 0.3%                | 0.8%                        | 13.7%              | 2.8%                    | 4.1%      | 2.1%         | 4.7%                      | 11.2%                      | 0.2%               | 4.1%       | 4.1%       | 2,1%        | 2.7%                         | 2.1%     | 0.0%            | 0.0%    | 0.0%  | 0,0% | 28.5%               | 100%  |
| APA      | 3        | 5.0%                               | 1,7%                                   | 1.6%           | 0.2%                | 0.1%                        | 9.1%               | 5,7%                    | 3.0%      | 1.8%         | 5.7%                      | 0.0%                       | 1,1%               | 12,5%      | 0.0%       | 0.8%        | 0.4%                         | 1.8%     | 0.0%            | 0.0%    | 0.1%  | 0.0% | 50,2%               | 100%  |
| APR      | 5        | 0.0%                               | 0.0%                                   | 0.0%           | 1.8%                | 0.0%                        | 1.7%               | 2.4%                    | 0.3%      | 0.0%         | 0.0%                      | 0.0%                       | 0.0%               | 68.6%      | 0.0%       | 0.0%        | 0.0%                         | 0.3%     | 0.176           | 0.0%    | 7.7%  | 0.0% | 17.6%               | 100%  |
| APR      | 6        | 2.2%                               | 0.6%                                   | 2.1%           | 0.2%                | 1.2%                        | 5.4%               | 0.0%                    | 1.9%      | 0.8%         | 3.8%                      | 5.5%                       | 0.1%               | 4.1%       | 10.2%      | 0.2%        | 1.2%                         | 4.7%     | 0.0%            | 0.3%    | 4.7%  | 0.0% | 49.6%               | 100%  |
| APR      | 7        | 0.0%                               | 0.1%                                   | 0.5%           | 0.0%                | 0.0%                        | 1.3%               | 2.1%                    | 0,5%      | 5.2%         | 2.7%                      | 1.3%                       | 0.0%               | 0.4%       | 0.0%       | 5.9%        | 0.0%                         | 3.0%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 75.7%               | 100%  |
| APR      | 6        | 1.2%                               | 0.9%                                   | 0.4%           | 0.0%                | 0.2%                        | 3.7%               | 0.6%                    | 1.6%      | 0.2%         | 3.4%                      | 0.5%                       | 0.3%               | 8.0%       | 0.0%       | 0.5%        | 0.0%                         | 4.7%     | 0.0%            | 0.0%    | 1.0%  | 0.0% | 72.9%               | 100%  |
| APR      | 9        | 5.6%                               | 0.6%                                   | 0.5%           | 0.0%                | 0.0%                        | 7.0%               | 3,5%                    | 1.1%      | 0.5%         | 1.9%                      | 1.0%                       | 0.1%               | 2.4%       | 0.0%       | 0,1%        | 8.7%                         | 4.1%     | 0.0%            | 0.0%    | 0,2%  | 0.0% | 62.6%               | 100%  |
| APR      | 10       | 0,0%                               | 0,9%                                   | 0,7%           | 0,6%                | 0.1%                        | 4.5%               | 5,3%                    | 0.9%      | 9.6%         | 2.5%                      | 5.4%                       | 0.0%               | 7.5%       | 0.0%       | 0.0%        | 1.5%                         | 10.4%    | 0.0%            | 0,0%    | 13.1% | 0.0% | 37.1%               | 100%  |
| APR      | 11       | 5.5%                               | 0.5%                                   | 0,3%           | 1.1%                | 0.1%                        | 3.1%               | 7.5%                    | 0.5%      | 4,0%         | 2.4%                      | 0,9%                       | 0.5%               | 1.4%       | 2.1%       | 2,2%        | 0.1%                         | 4.1%     | 0.0%            | 0.0%    | 12.9% | 0,0% | 50.9%               | 100%  |
| APR      | 12       | 8.2%                               | 0.4%                                   | 1.2%           | 1.5%                | 0.0%                        | 4.6%               | 4.5%                    | 1,0%      | 4,9%         | 5.7%                      | 5.8%                       | 0.6%               | 15.5%      | 0.0%       | 0.0%        | 0.0%                         | 5.0%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 41.0%               | 100%  |
| APR      | 13       | 12.4%                              | 1.7%                                   | 0,4%           | 4.0%                | 0.3%                        | 8.0%               | 3.4%                    | 0.0%      | 0.0%         | 0.0%                      | 0.8%                       | 0.0%               | 0.6%       | 0.0%       | 6.4%        | 6.1%                         | 7,4%     | 0.0%            | 0.0%    | 2.7%  | 0.0% | 45.7%               | 100%  |
| APR      | 16       | 1.374                              | 0.6%                                   | 0.8%           | 0.0%                | 1.176                       | 2,570              | 1.1%                    | 1.48      | 0.5%         | 4.0%                      | 1.6%                       | 0,1%               | 9,476      | 0.0%       | 1.476       | 0.5%                         | 3.2%     | 0.0%            | 1.0%    | 0.07  | 0.0% | 73.376              | 100%  |
| APR      | 15       | 1.5%                               | 1.0%                                   | 0.0%           | 0.0%                | 0.0%                        | 4.5%               | 7 8%                    | 23.0%     | 1.7%         | 2.9%                      | 3.7%                       | 0.1%               | 2 3%       | 0.0%       | 0.2%        | 0.0%                         | 3 3%     | 0.0%            | 0.0%    | 1.0%  | 0.0% | 47 4%               | 100%  |
| APR      | 17       | 0.0%                               | 0.0%                                   | 0.0%           | 0.0%                | 0.0%                        | 0.5%               | 5.3%                    | 0.2%      | 0.5%         | 1.8%                      | 0.4%                       | 0.0%               | 59.8%      | 0.0%       | 0.0%        | 0.1%                         | 0.0%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 31.5%               | 100%  |
| APR      | 18       | 11.7%                              | 1.1%                                   | 0.0%           | 0.0%                | 0.0%                        | 15.5%              | 1.5%                    | 5.8%      | 1.0%         | 2.6%                      | 5.1%                       | 0.5%               | 11.4%      | 0.0%       | 0.0%        | 0.0%                         | 2.1%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 41.3%               | 100%  |
| APR      | 19       | 0.0%                               | 4.0%                                   | 2.9%           | 0.6%                | 0.0%                        | 1.7%               | 18.9%                   | 0.0%      | 6.5%         | 3.7%                      | 1.3%                       | 0.1%               | 7.6%       | 0.0%       | 0.0%        | 0.8%                         | 8.5%     | 0.0%            | 0.0%    | 3.2%  | 0.0% | 40.2%               | 100%  |
| APR      | 20       | 5.5%                               | 0.6%                                   | 2.2%           | 0.0%                | 0.0%                        | 7.7%               | 3.4%                    | 0.4%      | 1.1%         | 2.4%                      | 2.3%                       | 0.2%               | 2.8%       | 0.0%       | 0.4%        | 0.1%                         | 3.5%     | 3.3%            | 0.0%    | 0.0%  | 0.0% | 64.2%               | 100%  |
| APR      | 21       | 4.0%                               | 1.5%                                   | 1.5%           | 0.0%                | 0.0%                        | 7.3%               | 5.3%                    | 0.7%      | 12.1%        | 3.1%                      | 7.0%                       | 0.0%               | 4.3%       | 0,0%       | 0.0%        | 0.5%                         | 0.0%     | 0.0%            | 0.0%    | 0.0%  | 0,0% | 52.3%               | 100%  |
| APR      | 22       | 0.7%                               | 0.5%                                   | 0.0%           | 2.1%                | 0.0%                        | 5.6%               | 8.7%                    | 0.6%      | 0.5%         | 2.7%                      | 5.2%                       | 0.1%               | 9.2%       | 0.0%       | 0.0%        | 0,2%                         | 0,0%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 63.0%               | 100%  |
| APR      | 23       | 7.3%                               | 1.0%                                   | 1.2%           | 0.0%                | 0.1%                        | 4,7%               | 0.9%                    | 0.2%      | 2.0%         | 2.1%                      | 3.7%                       | 0.1%               | 6.7%       | 0,0%       | 0,8%        | 0.3%                         | 4.8%     | 0.0%            | 0.0%    | 0,9%  | 0.0% | 63.1%               | 100%  |
| APR      | 20       | 4,676                              | 1.5%                                   | 0.5%           | 0,1%                | 0.2%                        | 3,0%               | 3.0%                    | 3.9%      | 3.1%         | 0.1%                      | 3.8%                       | 0.2%               | 10,6%      | 0,0%       | 0.1%        | 0,1%                         | 3.5%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 53.3%               | 100%  |
| APR      | 25       | 0.7%                               | 3.7%                                   | 2.1%           | 0.7%                | 0.1%                        | 3,076              | 1.1%                    | 1.6%      | 0.0%         | 2.7%                      | 2.7%                       | 0.0%               | 1.1.7      | 0.0%       | 4.0%        | 0.3%                         | 5.5%     | 0.0%            | 0.0%    | 0.5%  | 0.0% | 50 3%               | 100%  |
| APR      | 27       | 0.0%                               | 0.9%                                   | 0.5%           | 0.0%                | 0.0%                        | 3.3%               | 5.7%                    | 1.7%      | 3.1%         | 2.9%                      | 2.6%                       | 0.4%               | 3.9%       | 2.5%       | 0.2%        | 0.5%                         | 15.1%    | 0.0%            | 0.0%    | 12.0% | 0.0% | 44.7%               | 100%  |
| APR      | 28       | 0.2%                               | 0.5%                                   | 1.1%           | 0.2%                | 0.3%                        | 4.5%               | 1.5%                    | 1.2%      | 1.6%         | 3.6%                      | 4.3%                       | 0.1%               | 6.8%       | 15.8%      | 0.1%        | 0.2%                         | 3.2%     | 0.0%            | 0.0%    | 2.1%  | 0.0% | 52.2%               | 100%  |
| APR      | 29       | 6.2%                               | 1.4%                                   | 3,0%           | 0.3%                | 0.5%                        | 5.6%               | 4,1%                    | 0.1%      | 0.8%         | 3.4%                      | 2.4%                       | 0.3%               | 5.2%       | 0.0%       | 0.2%        | 0.0%                         | 5.4%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 61.1%               | 10074 |
| APR      | 30       | 9.7%                               | 1.1%                                   | 1,8%           | 0,9%                | 0.0%                        | 6.5%               | 7.6%                    | 2.5%      | 0.1%         | 1.9%                      | 0.5%                       | 0.2%               | 6.4%       | 0.0%       | 0.0%        | 0.7%                         | 1.0%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 59.2%               | 100%  |
| APR      | 31       | 1.6%                               | 0.9%                                   | 2.0%           | 0.0%                | 1.0%                        | 2.3%               | 4.9%                    | 0.7%      | 5.0%         | 5.7%                      | 5.5%                       | 0.2%               | 3.7%       | 0.0%       | 0.0%        | 1.0%                         | 1.7%     | 0.0%            | 0.0%    | 1.4%  | 0.0% | 62.0%               | 100%  |
| APR      | 32       | 0.1%                               | 0.5%                                   | 1,3%           | 0.1%                | 0.0%                        | 5.1%               | 1.5%                    | 1.9%      | 3.5%         | 7,3%                      | 5.1%                       | 0.2%               | 14.5%      | 0.0%       | 0.2%        | 0.5%                         | 7.0%     | 0.5%            | 0.0%    | 1.1%  | 0.0% | 49.5%               | 100%  |
| APR      | 33       | 1.1%                               | 0.7%                                   | 0.6%           | 0.8%                | 0,2%                        | 5.3%               | 19.2%                   | 0.7%      | 2.6%         | 6.5%                      | 8.1%                       | 0.1%               | 12.1%      | 0.0%       | 0.0%        | 0.2%                         | 0.4%     | 0.0%            | 0.0%    | 0.6%  | 0.0% | 40.8%               | 100%  |
| APR      | 34       | 9.0%                               | 1.7%                                   | 2.1%           | 0.3%                | 0,6%                        | 5.3%               | 1.3%                    | 0.0%      | 0.0%         | 3.4%                      | 1.9%                       | 0,0%               | 6,0%       | 0.0%       | 0.0%        | 0.0%                         | 3.0%     | 0.0%            | 0,0%    | 0.0%  | 0.0% | 65.3%               | 100%  |
| APR      | 35       | 10.9%                              | 1.0%                                   | 2,4%           | 0.0%                | 0.2%                        | 9.9%               | 0.0%                    | 0,7%      | 2,2%         | 4.3%                      | 5.4%                       | 0.4%               | 21.2%      | 0.0%       | 0,3%        | 0.0%                         | 4.2%     | 0.0%            | 0.0%    | 1.7%  | 0,0% | 35.2%               | 100%  |
| APR      | 30       | 5.3%                               | 0.9%                                   | 0.2%           | 0.0%                | 0.1%                        | 9.37               | 8.7%                    | 1,4%      | 10.2%        | 0.5%                      | 3.474                      | 0.4%               | 15%        | 0.0%       | 0.7%        | 0.6%                         | 7.0%     | 0.4%            | 0.0%    | 1.0%  | 0.0% | 47,6%               | 100%  |
| APR      | 3.8      | 4.5%                               | 2.1%                                   | 2.9%           | 0.0%                | 0.8%                        | 5.8%               | 1.8%                    | 2.4%      | 5.4%         | 2.0%                      | 1.7%                       | 0.4%               | 15.7%      | 0.0%       | 0.8%        | 2 9%                         | 2.0%     | 2.4%            | 0.7%    | 0.0%  | 0.0% | 42 8%               | 100%  |
| APR      | 39       | 2.3%                               | 0.5%                                   | 0.0%           | 0.5%                | 0.2%                        | 14.5%              | 5,2%                    | 0.0%      | 20.6%        | 4.9%                      | 7.1%                       | 2.5%               | 11.5%      | 0.0%       | 0.0%        | 0.4%                         | 0.1%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 26.3%               | 100%  |
| APR      | 40       | 1.0%                               | 0.8%                                   | 0.4%           | 0.1%                | 0.0%                        | 12.7%              | 1.2%                    | 2.6%      | 7.0%         | 3.1%                      | 4.5%                       | 0.2%               | 11.1%      | 0.0%       | 0.2%        | 0.8%                         | 4.4%     | 0.0%            | 0.0%    | 0.9%  | 0.0% | 49.4%               | 100%  |
| APR      | 41       | 4.6%                               | 0.7%                                   | 1.7%           | 0.0%                | 1.0%                        | 4.9%               | 1.6%                    | 4.6%      | 2.2%         | 11.9%                     | 6.1%                       | 0.2%               | 9.2%       | 0.0%       | 1.0%        | 1.0%                         | 3.6%     | 0.0%            | 0.0%    | 1.3%  | 0.0% | 44.4%               | 100%  |
| APR      | 42       | 1.0%                               | 0.5%                                   | 1.2%           | 0.6%                | 1.3%                        | 4.0%               | 0.0%                    | 2.9%      | 1.5%         | 4.0%                      | 4.6%                       | 0.4%               | 1.1%       | 0.0%       | 0.0%        | 1.0%                         | 1.6%     | 0.0%            | 0.0%    | 8,7%  | 0.0% | 65.4%               | 100%  |
| APR      | 43       | 0.5%                               | 0.7%                                   | 0.3%           | 0,0%                | 1.3%                        | 7.3%               | 3.2%                    | 0.8%      | B.4%         | 6,1%                      | 2.2%                       | 0.4%               | 0.3%       | 0.0%       | 2.8%        | 0,4%                         | 2.9%     | 2.8%            | 0.0%    | 29.2% | 0.0% | 30.5%               | 100%  |
| APR      | 44       | 4.2%                               | 0.0%                                   | 2.5%           | 0.0%                | 0.0%                        | 1.8%               | 16.0%                   | 0.9%      | 13.6%        | 6.7%                      | 5.8%                       | 0.0%               | 33.3%      | 0.0%       | 1.1%        | 0,0%                         | 0.0%     | 0.0%            | 0.0%    | 12.5% | 0,0% | 1.7%                | 100%  |
| APR      | 45       | 0.5%                               | 0.8%                                   | 1.3%           | 0.0%                | 0.5%                        | 5.5%               | 6.5%                    | 0.9%      | 23.1%        | 13.2%                     | 7.2%                       | 0.0%               | 13.4%      | 0.0%       | 0.0%        | 0.0%                         | 0.0%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 27.2%               | 100%  |
| APR      | 46       | 1.6%                               | 0.8%                                   | 0.8%           | 1.0%                | 0.8%                        | 2.4%               | 1.0%                    | 3.0%      | 0.3%         | 1.4%                      | 2.1%                       | 0.2%               | 2.7%       | 45.7%      | 0.6%        | 0.2%                         | 0.6%     | 0.4%            | 0.0%    | 3.2%  | 0.0% | 31.1%               | 100%  |
| APR      | 47       | 10 000                             | 0.5%                                   | 0.3%           | 0.0%                | 0.2%                        | 1.0%               | 3.0%                    | 3.4%      | 9.0%         | 3.2%                      | 5.2%                       | 0.0%               | 24,5%      | 4,1%       | 9.2%        | 0.0%                         | 1.5%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 31.3%               | 100%  |
| APE      | 40       | 2 1%                               | 1.0%                                   | 1.7%           | 0.0%                | 0.4%                        | 10 4%              | 6 3%                    | 0.7%      | 1.7%         | d 4%                      | 5.6%                       | 0.5%               | 14 0%      | 0.0%       | 0.7%        | 0.0%                         | 2.7%     | 0.0%            | 0.0%    | 0.0%  | 0.0% | 45 04/              | 100%  |
| APR      | 50       | 13.5%                              | 0.3%                                   | 0.9%           | 1.2%                | 0.2%                        | 4.3%               | 9.6%                    | 0.7%      | 0.7%         | 13.6%                     | 4.3%                       | 0.2%               | 8.6%       | 11.7%      | 0.0%        | 0.8%                         | 3.3%     | 0.0%            | 0.0%    | 2.3%  | 0.0% | 25.4%               | 100%  |
| APR      | 51       | 2.4%                               | 1.0%                                   | 2.4%           | 1.2%                | 0.4%                        | 6.1%               | 5.2%                    | 0.4%      | 0.4%         | 3.7%                      | 3.4%                       | 0.0%               | 8.2%       | 0.0%       | 0.0%        | 1.0%                         | 9.7%     | 0.0%            | 0.0%    | 6.9%  | 0.0% | 47.9%               | 100%  |
| Weighted | Average: | 4.0%                               | 1.0%                                   | 1.0%           | 0.5%                | 0.3%                        | 5.3%               | 5.1%                    | 1.9%      | 3.3%         | 4.5%                      | 3.9%                       | 0.2%               | 10.4%      | 2.0%       | 0.5%        | 0.7%                         | 3.6%     | 0.2%            | 0.1%    | 2.7%  | 0.0% | \$7.5%              | 100%  |

HR Leon County, FL 2011 Waste Audit - Final Report



#### APRIL 2011 COMPOSITION OF GARBAGE DISPOSED - ALL SECTORS (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - RESIDENTIAL APRIL 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glass Food &<br>Boverage Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers | Corrugated<br>Cardboard | Newspaper | Office Paper | Other Recyclable<br>Paper | Other Compostable<br>Paper | Aseptic Containers | Food Waste | Yard Waste | Electronics | Mazardous/Special<br>Wastes | Textiles | Carpet/ Padding | Fumiture | G    | Tires | All Other Materials | Total |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|--------------------|-------------------------|-----------|--------------|---------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|----------|------|-------|---------------------|-------|
| APR      | 3        | 5.2%                                | 1.7%                                   | 0.9%           | 0,2%                 | 0.1%                        | 9.1%               | 5.7%                    | 3,6%      | 0.4%         | 5.7%                      | 0.0%                       | 1,1%               | 12.8%      | 0.0%       | 0.8%        | 0.4%                        | 1.8%     | 0.0%            | 0.0%     | 0.1% | 0.0%  | 50,2%               | 100%  |
| APR      | б        | 2.2%                                | 0.6%                                   | 2.1%           | 0.2%                 | 1.2%                        | 6.4%               | 0.0%                    | 1.9%      | 0.8%         | 3.8%                      | 5.5%                       | 0.1%               | 4.1%       | 10.2%      | 0.2%        | 1.2%                        | 4.7%     | 0.0%            | 0.3%     | 4.7% | 0.0%  | 49.6%               | 100%  |
| APR      | 8        | 1.2%                                | 0.9%                                   | 0.4%           | 0.0%                 | 0.2%                        | 3.7%               | 0.6%                    | 1.6%      | 0.2%         | 3.4%                      | 0.5%                       | 0.3%               | B.0%       | 0.0%       | 0.5%        | 0.0%                        | 4.7%     | 0.0%            | 0.0%     | 1.0% | 0.0%  | 72.9%               | 100%  |
| APR      | 9        | 5.6%                                | 0.6%                                   | 0.5%           | 0.0%                 | 0.0%                        | 7.0%               | 3.8%                    | 1.1%      | 0.5%         | 1.9%                      | 1.0%                       | 0.1%               | 2.4%       | 0.0%       | 0.1%        | B.7%                        | 4.1%     | 0.0%            | 0.0%     | 0.2% | 0.0%  | 62.6%               | 100%  |
| APR      | 13       | 12.4%                               | 1.7%                                   | 0.4%           | 4.0%                 | 0.3%                        | 8.0%               | 3.4%                    | 0.0%      | 0.0%         | 0.0%                      | 0.8%                       | 0.0%               | 0.6%       | 0.0%       | 6.4%        | б.1%                        | 7.4%     | 0.0%            | 0.0%     | 2.7% | 0.0%  | 45.7%               | 100%  |
| APR      | 16       | 1.5%                                | 1.0%                                   | 0.0%           | 0.0%                 | 0.0%                        | 4.5%               | 7.8%                    | 23.0%     | 1.2%         | 2.9%                      | 3.7%                       | 0.1%               | 2.3%       | 0.0%       | 0.2%        | 0.0%                        | 3.3%     | 0.0%            | 0.0%     | 1.0% | 0.0%  | 47.4%               | 100%  |
| APR      | 23       | 7.3%                                | 1.0%                                   | 1.2%           | 0.0%                 | 0.1%                        | 4.7%               | 0.9%                    | 0.2%      | 2.0%         | 2.1%                      | 3.7%                       | 0.1%               | 6.7%       | 0.0%       | 0.8%        | 0.3%                        | 4.8%     | 0.0%            | 0,0%     | 0.9% | 0.0%  | 63.1%               | 100%  |
| APR      | 24       | 4.8%                                | 1.5%                                   | 0.5%           | 0.1%                 | 0,2%                        | 5.0%               | 3.6%                    | 3.9%      | 3.1%         | 6,1%                      | 3.8%                       | 0.2%               | 10.6%      | 0.0%       | 0.1%        | 0.1%                        | 3.3%     | 0.0%            | 0.0%     | 0.0% | 0.0%  | 53.3%               | 100%  |
| APR      | 26       | 9.2%                                | 2.7%                                   | 2.1%           | 0.2%                 | 0.1%                        | 7.7%               | 1.1%                    | 1.6%      | 0.2%         | 2.7%                      | 2.2%                       | 0.0%               | 3.5%       | 0.0%       | 0.0%        | 0.3%                        | 6.6%     | 0.0%            | 0.0%     | 0.5% | 0.0%  | 59.3%               | 100%  |
| APR      | 29       | 6.2%                                | 1.4%                                   | 3.0%           | 0.3%                 | 0.5%                        | 5.6%               | 4.1%                    | 0.1%      | 0.8%         | 3.4%                      | 2.4%                       | 0.3%               | 5.2%       | 0.0%       | 0.2%        | 0.0%                        | 5.4%     | 0.0%            | 0.0%     | 0.0% | 0.0%  | 61.1%               | 100%  |
| APR      | 34       | 9.0%                                | 1.7%                                   | 2.1%           | 0.3%                 | 0.6%                        | 5,3%               | 1.3%                    | 0.0%      | 0.0%         | 3.4%                      | 1.9%                       | 0.0%               | 6.0%       | 0.0%       | 0.0%        | 0.0%                        | 3.0%     | 0.0%            | 0.0%     | 0.0% | 0.0%  | 65.3%               | 100%  |
| APR      | 36       | 5.5%                                | 0.9%                                   | 1.2%           | 1.2%                 | 0.1%                        | 4.5%               | 5.1%                    | 3.4%      | 1.4%         | 6.5%                      | 3.4%                       | 0.4%               | 2.9%       | 0.0%       | 0.7%        | 0.6%                        | 7.0%     | 0,4%            | 0.0%     | 7.0% | 0.0%  | 47.5%               | 100%  |
| APR      | 38       | 4.5%                                | 2.1%                                   | 2.9%           | 0.0%                 | 0.8%                        | 5.8%               | 1.8%                    | 2.4%      | 5.4%         | 2.0%                      | 3.7%                       | 0.4%               | 15.7%      | 0.0%       | 0.8%        | 2.9%                        | 2.9%     | 2.4%            | 0.7%     | 0.0% | 0.0%  | 42.8%               | 100%  |
| APR      | 41       | 4.6%                                | 0.7%                                   | 1.7%           | 0.0%                 | 1.0%                        | 4.9%               | 1.5%                    | 4.6%      | 2.2%         | 11.9%                     | 6.1%                       | 0.2%               | 9.2%       | 0.0%       | 1.0%        | 1.0%                        | 3.6%     | 0.0%            | 0.0%     | 1.3% | 0.0%  | 44,4%               | 100%  |
| APR      | 42       | 1.0%                                | 0.5%                                   | 1.2%           | 0.6%                 | 1.3%                        | 4.0%               | 0.0%                    | 2.9%      | 1.5%         | 4.0%                      | 4.6%                       | 0.4%               | 1.1%       | 0.0%       | 0.0%        | 1.0%                        | 1.6%     | 0.0%            | 0.0%     | 8.7% | 0.0%  | 65.4%               | 100%  |
| APR      | 46       | 1.8%                                | 0.8%                                   | 0.8%           | 1.0%                 | 0.8%                        | 2.4%               | 1.0%                    | 3.0%      | 0.3%         | 1.4%                      | 2.1%                       | 0.2%               | 2.7%       | 45.7%      | 0.6%        | 0.2%                        | 0.6%     | 0.4%            | 0.0%     | 3.2% | 0.0%  | 31.1%               | 100%  |
| APR      | 49       | 2.1%                                | 1.0%                                   | 1.2%           | 0.1%                 | 0.5%                        | 10.4%              | 6.3%                    | 0.7%      | 1.2%         | 4.4%                      | 5.6%                       | 0.5%               | 14.9%      | 0.0%       | 0.7%        | 0.5%                        | 2.2%     | 0.0%            | 0.0%     | 0.9% | 0.0%  | 46.9%               | 100%  |
| APR      | 51       | 2,4%                                | 1.0%                                   | 2.4%           | 1.2%                 | 0.4%                        | 5.1%               | 5.2%                    | 0.4%      | 0.4%         | 3.7%                      | 3.4%                       | 0.0%               | 8.2%       | 0.0%       | 0.0%        | 1.0%                        | 9.7%     | 0.0%            | 0.0%     | 6.9% | 0.0%  | 47.9%               | 100%  |
| Weighted | Average: | 4.7%                                | 1.2%                                   | 1.3%           | 0.5%                 | 0.5%                        | 5.5%               | 2.8%                    | 3.1%      | 1.3%         | 4.0%                      | 3.1%                       | 0.2%               | 6.3%       | 4.2%       | 0.7%        | 1.1%                        | 4.1%     | 0.2%            | 0.1%     | 2.4% | 0.0%  | 52.7%               | 100%  |

### APRIL 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDENTIAL (% BY WEIGHT)



| Month    | Sample # | Glass Food &<br>Beverage Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers | Corrugated<br>Cardboard | Newspaper | Office Paper | Other Recyclable<br>Paper | Other Compostable<br>Paper | Aseptic Conteiners | Food Weste | Yard Waste | Electronics | Mazardous/Special<br>Wastes | Textiles | Carpet/ Pedding | Furmiture | CELD | Tires | All Other Materials | Total |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|--------------------|-------------------------|-----------|--------------|---------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|-----------|------|-------|---------------------|-------|
| APR      | Э        | 5.2%                                | 1.7%                                   | 0.9%           | 0.2%                 | 0.1%                        | 9.1%               | 5.7%                    | 3.6%      | D.4%         | 5.7%                      | 0.0%                       | 1.1%               | 12.8%      | 0.0%       | 0,8%        | 0.4%                        | 1.8%     | 0.0%            | 0.0%      | 0.1% | 0.0%  | 50.2%               | 100%  |
| APR      | 16       | 1.5%                                | 1.0%                                   | 0.0%           | 0,0%                 | 0.0%                        | 4.5%               | 7.8%                    | 23.0%     | 1.2%         | 2.9%                      | 3.7%                       | 0.1%               | 2.3%       | 0.0%       | 0.2%        | 0.0%                        | 3.3%     | 0.0%            | 0.0%      | 1.0% | 0.0%  | 47.4%               | 100%  |
| APR      | 23       | 7.3%                                | 1.0%                                   | 1.2%           | 0.0%                 | 0.1%                        | 4.7%               | 0.9%                    | 0.2%      | 2.0%         | 2.1%                      | 3.7%                       | 0.1%               | 6.7%       | 0.0%       | 0.8%        | 0.3%                        | 4.8%     | 0.0%            | 0.0%      | 0.9% | 0.0%  | 63.1%               | 100%  |
| APR      | 24       | 4.8%                                | 1.5%                                   | 0.5%           | 0.1%                 | 0.2%                        | 5.0%               | 3.6%                    | 3.9%      | 3.1%         | 6.1%                      | 3.8%                       | 0.2%               | 10.6%      | 0.0%       | 0.1%        | 0.1%                        | 3.3%     | 0.0%            | 0.0%      | 0.0% | 0.0%  | 53.3%               | 100%  |
| APR      | 34       | 9.0%                                | 1.7%                                   | 2.1%           | 0.3%                 | D.6%                        | 5.3%               | 1.3%                    | 0.0%      | 0.0%         | 3.4%                      | 1.9%                       | 0.0%               | 5.0%       | 0.0%       | 0.0%        | 0.0%                        | 3.0%     | 0.0%            | 0.0%      | 0.0% | 0,0%  | 65.3%               | 100%  |
| APR      | 36       | 5.5%                                | 0.9%                                   | 1.2%           | 1.2%                 | 0.1%                        | 4.5%               | 5.1%                    | 3.4%      | 1.4%         | 6.5%                      | 3,4%                       | 0.4%               | 2.9%       | 0.0%       | 0.7%        | 0.6%                        | 7.0%     | 0.4%            | 0.0%      | 7.0% | 0,0%  | 47.6%               | 100%  |
| APR      | 38       | 4.5%                                | 2.1%                                   | 2.9%           | 0.0%                 | 0.8%                        | 5.8%               | 1.8%                    | 2.4%      | 5.4%         | 2.0%                      | 3,7%                       | 0,4%               | 15.7%      | 0.0%       | 0.8%        | 2.9%                        | 2.9%     | 2.4%            | 0.7%      | 0.0% | 0.0%  | 42.8%               | 100%  |
| APR      | 49       | 2.1%                                | 1.0%                                   | 1.2%           | 0.1%                 | 0.5%                        | 10.4%              | 6.3%                    | 0.7%      | 1.2%         | 4.4%                      | 5.6%                       | 0.5%               | 14.9%      | 0.0%       | 0.7%        | 0.5%                        | 2.2%     | 0.0%            | 0.0%      | 0.9% | 0.0%  | 46,9%               | 100%  |
| Weighted | Average: | 5.1%                                | 1.3%                                   | 1.2%           | 0.3%                 | 0.3%                        | 5.9%               | 4.0%                    | 4.4%      | 1.9%         | 4.3%                      | 3.4%                       | 0.3%               | 8.6%       | 0.0%       | 0.5%        | 0.6%                        | 3.9%     | 0.4%            | 0.1%      | 1.6% | 0.0%  | 52.1%               | 100%  |

#### INDIVIDUAL SAMPLE RESULTS - MULTI-FAMILY APRIL 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

### APRIL 2011 COMPOSITION OF GARBAGE DISPOSED - MULTI-FAMILY (% BY WEIGHT)



#### INDIVIDUAL SAMPLE RESULTS - RURAL WASTE SERVICE CENTERS APRIL 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample K | Glass Food &<br>Beverage Contalners | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers | Corrugated<br>Cardboard | Newspaper | Office Paper | Other Recyclable<br>Paper | Other Compostable | Aseptic Containers | Food Waste | Yard Waste | Electronics | Hazardous/Special<br>Wastes | Textiles | Carpet/ Pedding | Fumiture | C&D  | Tires | All Other Materials | Total |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|--------------------|-------------------------|-----------|--------------|---------------------------|-------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|----------|------|-------|---------------------|-------|
| APR      | 6        | 2.2%                                | 0.6%                                   | 2.1%           | 0.2%                 | 1.2%                        | 6.4%               | 0.0%                    | 1.9%      | 0.8%         | 3.8%                      | 5.5%              | 0.1%               | 4.1%       | 10.2%      | 0.2%        | 1.2%                        | 4.7%     | 0.0%            | 0.3%     | 4.7% | 0.0%  | 49.6%               | 1009  |
| APR      | 13       | 12.4%                               | 1.7%                                   | 0.4%           | 4.0%                 | 0.3%                        | 8.0%               | 3.4%                    | 0.0%      | 0.0%         | 0.0%                      | 0.8%              | 0.0%               | 0.6%       | 0.0%       | 6.4%        | 6.1%                        | 7.4%     | 0.0%            | 0.0%     | 2.7% | 0.0%  | 45.7%               | 1009  |
| APR      | 26       | 9.2%                                | 2.7%                                   | 2.1%           | 0.2%                 | 0.1%                        | 7.7%               | 1.1%                    | 1.6%      | 0.2%         | 2.7%                      | 2.2%              | 0.0%               | 3.5%       | 0.0%       | 0.0%        | 0.3%                        | 5.6%     | 0.0%            | 0.0%     | 0.5% | D.0%  | 59.3%               | 1009  |
| APR      | 51       | 2.4%                                | 1.0%                                   | 2.4%           | 1.2%                 | 0.4%                        | 6.1%               | 5.2%                    | 0.4%      | 0.4%         | 3.7%                      | 3.4%              | 0.0%               | 8.2%       | 0.0%       | 0.0%        | 1.0%                        | 9.7%     | 0.0%            | 0.0%     | 6.9% | 0.0%  | 47.9%               | 1009  |
| Weighted | Average: | 6.8%                                | 1.6%                                   | 1.8%           | 1.3%                 | 0.5%                        | 7.1%               | 2.3%                    | 1.0%      | 0.3%         | 2.5%                      | 2.9%              | 0.0%               | 4.1%       | 2.2%       | 1.5%        | 2.0%                        | 7.1%     | 0.0%            | 0.1%     | 3.4% | 0.0%  | 51.4%               | 1009  |



### APRIL 2011 COMPOSITION OF GARBAGE DISPOSED - RURAL WASTE SERVICE CENTERS (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - COMMERCIAL APRIL 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glass Food B.<br>Beverage Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers | Corrugated<br>Cardboard | Newspaper | Office Paper | Other Recyclable<br>Paper | Other Compostable<br>Paper | Aseptic Containers | Food Waste | Vard Waste | Electronica | Hazardous/Special<br>Wastes | Textiles | Carpet/ Padding | Fumiture | 9     | Tire | All Other Materials | Total |
|----------|----------|--------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|--------------------|-------------------------|-----------|--------------|---------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|----------|-------|------|---------------------|-------|
| APR      | 1        | 1.6%                                 | 0.4%                                   | 0.5%           | 0.4%                 | 0.0%                        | 7.0%               | 0.9%                    | 3.4%      | 20.7%        | 2.1%                      | 8.1%                       | 0.1%               | 1.8%       | 0.0%       | 0.7%        | 0.8%                        | 8.1%     | 0.0%            | 4.9%     | 0,7%  | 0.0% | 37.9%               | 100%  |
| APR      | 2        | 12.8%                                | 2.7%                                   | 0.9%           | 0.3%                 | 0.8%                        | 13.7%              | 2.8%                    | 4.1%      | 2.1%         | 4.7%                      | 11.2%                      | 0.2%               | 4.1%       | 4.1%       | 2.1%        | 2.7%                        | 2.1%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 28.5%               | 100%  |
| APR      | 4        | 0.9%                                 | 1.1%                                   | 1.6%           | 0.0%                 | 0.0%                        | 5.2%               | 9.1%                    | 2.0%      | 1.8%         | 4.8%                      | 7.7%                       | 0.3%               | 3.2%       | 11.5%      | 1.5%        | 2.9%                        | 2.9%     | 0.1%            | 0.0%     | 0.6%  | 0.0% | 43.0%               | 100%  |
| APR      | 5        | 0.0%                                 | 0.0%                                   | 0.0%           | 1.8%                 | 0.0%                        | 1.7%               | 2.4%                    | 0.3%      | 0.0%         | 0.0%                      | 0.0%                       | 0.0%               | 68.6%      | 0.0%       | 0.0%        | 0.0%                        | 0.3%     | 0.0%            | 0.0%     | 7.2%  | 0.0% | 17.6%               | 100%  |
| APR      | 7        | 0.0%                                 | 0.1%                                   | 0.5%           | 0.0%                 | 0.0%                        | 1.3%               | 2.1%                    | 0.8%      | 5.2%         | 2.7%                      | 1.3%                       | 0.0%               | 0.4%       | 0.0%       | 5.9%        | 0.0%                        | 3.0%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 76.7%               | 100%  |
| APR      | 10       | 0.0%                                 | 0.9%                                   | 0.7%           | 0,6%                 | 0.1%                        | 4.5%               | 5.3%                    | 0.9%      | 9.6%         | 2.5%                      | 5.4%                       | 0.0%               | 7.5%       | 0.0%       | 0.0%        | 1.5%                        | 10.4%    | 0.0%            | 0,0%     | 13.1% | 0.0% | 37.1%               | 100%  |
| APR      | 11       | 5.5%                                 | 0.5%                                   | 0.3%           | 1.1%                 | 0,1%                        | 3.1%               | 7.5%                    | 0.5%      | 4,0%         | 2.4%                      | 0.9%                       | 0.5%               | 1.4%       | 2.1%       | 2.2%        | 0.1%                        | 4.1%     | 0.0%            | 0.0%     | 12.9% | 0.0% | 50.9%               | 100%  |
| APR      | 12       | 8.2%                                 | 0.4%                                   | 1.2%           | 1,5%                 | 0,0%                        | 4.6%               | 4.5%                    | 1.0%      | 4.9%         | 5,7%                      | 5.8%                       | 0.6%               | 15,5%      | 0,0%       | 0.0%        | 0,0%                        | 5,0%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 41.0%               | 1009  |
| APR      | 14       | 1.3%                                 | 0.8%                                   | 0.8%           | 0.0%                 | 1.1%                        | 2.3%               | 1.1%                    | 2.3%      | 0.5%         | 4.0%                      | 1.8%                       | 0.1%               | 4.4%       | 0.0%       | 1.4%        | 0.5%                        | 3.2%     | 0.0%            | 1.0%     | D.0%  | 0.0% | 73.3%               | 100%  |
| APR      | 15       | 1.1%                                 | 0.6%                                   | 1.2%           | 0.1%                 | 0.4%                        | 3.9%               | 12.5%                   | 1.4%      | 0.4%         | 0.9%                      | Z.4%                       | 0.0%               | 7.9%       | 0.0%       | 0.0%        | 0.0%                        | 4.1%     | 0.0%            | 0.0%     | 2.3%  | 0.0% | 60.7%               | 1009  |
| APR      | 17       | 0.0%                                 | 0.0%                                   | 0.0%           | 0.0%                 | 0.0%                        | 0.5%               | 5.3%                    | 0.2%      | 0.5%         | 1.8%                      | 0.4%                       | 0.0%               | 59.8%      | 0.0%       | 0.0%        | 0.1%                        | 0.0%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 31.5%               | 1009  |
| APR      | 18       | 11.7%                                | 1.1%                                   | 0.0%           | 0.0%                 | 0.0%                        | 15.6%              | 1.6%                    | 5.8%      | 1.0%         | 2.8%                      | 5.1%                       | 0.5%               | 11.4%      | 0.0%       | 0.0%        | 0.0%                        | 2.1%     | 0.0%            | 0,0%     | 0.0%  | 0.0% | 41.3%               | 1009  |
| APR      | 19       | 0.0%                                 | 4.0%                                   | 2.9%           | 0,6%                 | 0.0%                        | 1.7%               | 18.9%                   | 0.0%      | 5,5%         | 3.7%                      | 1.3%                       | 0.1%               | 7.5%       | 0.0%       | 0.0%        | 0.8%                        | 8.5%     | 0.0%            | 0.0%     | 3.2%  | 0.0% | 40.2%               | 1009  |
| APR      | 20       | 5.5%                                 | 0.6%                                   | 2.2%           | 0.0%                 | 0.0%                        | 7.7%               | 3.4%                    | 0.4%      | 1.1%         | 2.4%                      | 2.3%                       | 0.2%               | 2.8%       | 0.0%       | 0.4%        | 0.1%                        | 3.5%     | 3,3%            | 0.0%     | 0.0%  | 0.0% | 64.2%               | 1009  |
| APR      | 21       | 4.0%                                 | 1.6%                                   | 1.5%           | 0.0%                 | 0.0%                        | 7.3%               | 5.3%                    | 0.7%      | 12.1%        | 3.1%                      | 7.0%                       | 0.0%               | 4.3%       | 0.0%       | 0.0%        | 0.8%                        | 0.0%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 52.3%               | 1009  |
| APR      | 22       | 0.7%                                 | 0.5%                                   | 0.0%           | 2.1%                 | 0.0%                        | 6.6%               | 8.7%                    | 0.6%      | 0.5%         | 2.7%                      | 5.2%                       | 0.1%               | 9.2%       | 0.0%       | 0.0%        | 0.2%                        | 0.0%     | 0,0%            | 0.0%     | 0,0%  | 0.0% | 63.0%               | 1009  |
| APR      | 25       | 2.8%                                 | 4.3%                                   | 0.0%           | 1.0%                 | 0.0%                        | 3.6%               | 10.1%                   | 2.0%      | 0.0%         | 5.7%                      | 1.9%                       | 0.4%               | 1.1%       | 0.0%       | 2.8%        | 0.9%                        | 10.9%    | 0.0%            | 0.0%     | 4.0%  | 0.0% | 48.4%               | 100%  |
| APR      | 27       | 0.0%                                 | 0.9%                                   | 0.5%           | 0.0%                 | 0.0%                        | 3.3%               | 6.2%                    | 1.2%      | 3.1%         | 2.9%                      | 2.6%                       | 0.4%               | 3.9%       | 2.5%       | 0,2%        | 0.5%                        | 15.1%    | 0.0%            | 0,0%     | 12.0% | 0.0% | 44.7%               | 100%  |
| APR      | 28       | 0.2%                                 | 0,8%                                   | 1.1%           | 0.2%                 | 0.3%                        | 4.5%               | 1.8%                    | 1.2%      | 1.6%         | 3,6%                      | 4.3%                       | 0.1%               | 6.8%       | 15.8%      | 0.1%        | 0.2%                        | 3.2%     | 0,0%            | 0.0%     | 2.1%  | 0.0% | 52.2%               | 100%  |
| APR      | 30       | 9.7%                                 | 1,1%                                   | 1.8%           | 0.9%                 | 0.0%                        | 6.5%               | 7.6%                    | 2.5%      | 0,1%         | 1.9%                      | 0.5%                       | 0.2%               | 6.4%       | 0.0%       | 0.0%        | 0.7%                        | 1.0%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 59.2%               | 100%  |
| APR      | 31       | 1.8%                                 | 0.9%                                   | 2.0%           | 0.0%                 | 1.0%                        | 2.3%               | 4.9%                    | 0.7%      | 5.0%         | 5.7%                      | 5.5%                       | 0.2%               | 3.7%       | 0.0%       | 0.0%        | 1.0%                        | 1.7%     | 0.0%            | 0.0%     | 1.4%  | 0.0% | 62.0%               | 100%  |
| APR      | 32       | 0.1%                                 | 0.5%                                   | 1.3%           | 0.1%                 | 0.0%                        | 5.1%               | 1.5%                    | 1.9%      | 3.5%         | 7.3%                      | 5.1%                       | 0.2%               | 14.5%      | 0.0%       | 0,2%        | 0.5%                        | 7.0%     | 0.5%            | 0.0%     | 1.1%  | 0,0% | 49.5%               | 100%  |
| APR      | 33       | 1.1%                                 | 0.7%                                   | 0.6%           | 0.8%                 | 0.2%                        | 5.3%               | 19.2%                   | 0.7%      | 2.6%         | 6.5%                      | 8.1%                       | 0.1%               | 12.1%      | 0.0%       | 0.0%        | 0.2%                        | 0.4%     | 0.0%            | 0.0%     | 0.6%  | 0.0% | 40.8%               | 1009  |
| APR      | 35       | 10.9%                                | 1.0%                                   | 2.4%           | 0.0%                 | 0.2%                        | 9.9%               | 0.0%                    | 0.7%      | 2.2%         | 4.3%                      | 5.4%                       | 0.4%               | 21.2%      | 0.0%       | 0,3%        | 0.0%                        | 4.2%     | 0,0%            | 0,0%     | 1.7%  | 0.0% | 35.2%               | 100%  |
| APR      | 37       | 5.3%                                 | 0.8%                                   | 0.3%           | 0.0%                 | 0.2%                        | 7.7%               | 8.2%                    | 0.9%      | 10,3%        | 12.2%                     | 7.4%                       | 0.1%               | 1.5%       | 0.0%       | 0.1%        | 0.0%                        | 2.5%     | 0.0%            | 0.0%     | 1.8%  | 0.0% | 40.6%               | 100%  |
| APR      | 39       | 2.3%                                 | 0.6%                                   | 0.0%           | 0.5%                 | 0.2%                        | 14.8%              | 8.2%                    | 0.0%      | 20,6%        | 4.9%                      | 7.1%                       | 2.5%               | 11.5%      | 0.0%       | 0.0%        | 0.4%                        | 0.1%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 26.3%               | 100%  |
| APR      | 40       | 1.0%                                 | 0.8%                                   | 0,4%           | 0.1%                 | 0.0%                        | 12.2%              | 1.2%                    | 2.6%      | 7.0%         | 3.1%                      | 4.5%                       | 0.2%               | 11.1%      | 0.0%       | 0.2%        | 0.8%                        | 4.4%     | 0.0%            | 0.0%     | 0.9%  | 0.0% | 49,496              | 1009  |
| APR      | 43       | 0.5%                                 | 0.7%                                   | 0.3%           | 0.0%                 | 1,3%                        | 7,3%               | 3.2%                    | 0.8%      | 8.4%         | 6.1%                      | 2.2%                       | 0,4%               | 0.3%       | 0.0%       | 2.8%        | 0.4%                        | 2.9%     | 2.8%            | 0.0%     | 29,2% | 0.0% | 30.5%               | 1009  |
| APR      | 44       | 4.2%                                 | 0.0%                                   | 2.5%           | 0.0%                 | 0,0%                        | 1.8%               | 16.0%                   | 0.9%      | 13.6%        | 6.7%                      | 5.8%                       | 0.0%               | 33.3%      | 0.0%       | 1.1%        | 0.0%                        | 0.0%     | 0.0%            | 0.0%     | 12.5% | 0.0% | 1.7%                | 1009  |
| APR      | 45       | 0.5%                                 | 0.8%                                   | 1.3%           | 0.0%                 | 0.5%                        | 5.5%               | 6.5%                    | 0.9%      | 23.1%        | 13.2%                     | 7.2%                       | 0,0%               | 13.4%      | 0.0%       | 0.0%        | 0.0%                        | 0.0%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 27.2%               | 1009  |
| APR      | 47       | 2,1%                                 | 0.5%                                   | 0.3%           | 0.0%                 | 0.2%                        | 1.6%               | 3.6%                    | 3.4%      | 9.0%         | 3,2%                      | 5.2%                       | 0,0%               | 24.5%      | 4.1%       | 9.2%        | 0.0%                        | 1,8%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 31.3%               | 1009  |
| APR      | 48       | 15,9%                                | 0.8%                                   | 0.0%           | 0,0%                 | 0,4%                        | 8.9%               | 0.3%                    | 2,4%      | 6.4%         | 3.0%                      | 5.8%                       | 0,0%               | 8.1%       | 0.0%       | 0.0%        | 0.0%                        | 0.0%     | 0.0%            | 0.0%     | 0.0%  | 0.0% | 48.1%               | 1009  |
| APR      | 50       | 13.5%                                | 0.3%                                   | 0.9%           | 1.2%                 | 0.2%                        | 4.3%               | 9.5%                    | 0.2%      | 0.2%         | 13.6%                     | 4.3%                       | 0.2%               | 8.6%       | 11.2%      | 0.0%        | 0.8%                        | 3.3%     | 0.0%            | 0.0%     | 2.3%  | 0.0% | 25.4%               | 100%  |
| Weighted | Average: | 3.6%                                 | 0.8%                                   | 0.9%           | 0.4%                 | 0.2%                        | 5.1%               | 6.2%                    | 1.3%      | 4.3%         | 4.7%                      | 4.3%                       | 0.2%               | 12.4%      | 2.1%       | 0.9%        | 0.5%                        | 3.4%     | 0.2%            | 0.1%     | 2.9%  | 0.0% | 45.4%               | 100%  |

### APRIL 2011 COMPOSITION OF GARBAGE DISPOSED - COMMERCIAL (% BY WEIGHT)



#### INDIVIDUAL SAMPLE RESULTS - UNIVERSITY APRIL 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glaxe Food &<br>Beverage Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Contelners | Corrugated<br>Cardboard | Newspaper | Office Paper | Other Recyclable<br>Paper | Other Compostable<br>Paper | Aseptic Containers | Food Waste | Yard Waste | Electronics | Hazardous/Special<br>Westes | Textiles | Carpet/ Padding | Furniture | CBD  | Tire | All Other Materials | Total |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|--------------------|-------------------------|-----------|--------------|---------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|-----------|------|------|---------------------|-------|
| APR      | 1        | 1.6%                                | 0.4%                                   | 0.5%           | 0.4%                 | 0.0%                        | 7.0%               | 0.9%                    | 3.4%      | 20.7%        | 2.1%                      | 8.1%                       | 0.1%               | 1.8%       | 0.0%       | 0.7%        | 0.8%                        | 8.1%     | 0.0%            | 4.9%      | 0.7% | 0.0% | 37.9%               | 100%  |
| APR      | 2        | 12.8%                               | 2.7%                                   | 0.9%           | 0.3%                 | 0.8%                        | 13.7%              | 2.8%                    | 4.1%      | 2.1%         | 4.7%                      | 11.2%                      | 0,2%               | 4.1%       | 4.1%       | 2.1%        | 2.7%                        | 2.1%     | 0.0%            | 0.0%      | 0.0% | 0.0% | 28.5%               | 100%  |
| APR      | 12       | 8.2%                                | 0.4%                                   | 1.2%           | 1.5%                 | 0.0%                        | 4.6%               | 4.5%                    | 1.0%      | 4.9%         | 5.7%                      | 5.6%                       | 0.6%               | 15.5%      | 0.0%       | 0.0%        | 0.0%                        | 5.0%     | 0.0%            | 0.0%      | 0.0% | 0.0% | 41.0%               | 100%  |
| APR      | 39       | 2.3%                                | 0.6%                                   | 0.0%           | 0.5%                 | 0.2%                        | 14.8%              | 8.2%                    | 0.0%      | 20.5%        | 4.9%                      | 7.1%                       | 2.5%               | 11.5%      | 0.0%       | 0.0%        | 0.4%                        | 0.1%     | 0,0%            | 0.0%      | 0.0% | 0.0% | 26.3%               | 100%  |
| APR      | 40       | 1.0%                                | 0.8%                                   | 0.4%           | 0.1%                 | 0.0%                        | 12.2%              | 1.2%                    | 2.6%      | 7.0%         | 3.1%                      | 4.5%                       | 0.2%               | 11.1%      | 0.0%       | 0.2%        | 0.8%                        | 4.4%     | 0.0%            | 0,0%      | 0.9% | 0.0% | 49.4%               | 100%  |
| Weighted | Average: | 5.1%                                | 1.0%                                   | 0.7%           | 0.5%                 | 0.2%                        | 10.1%              | 2.9%                    | 2.5%      | 10.2%        | 3.9%                      | 7.2%                       | 0.5%               | 8.6%       | 0.8%       | 0.6%        | 1.0%                        | 4.4%     | 0.0%            | 1.1%      | 0.4% | 0.0% | 38.3%               | 100%  |

# Glass Food & Beverage Containers, Aluminum Food & Beverage 5.1% Containers, 1.0% \_Tin/Steel Cans, 0.7% Other Ferrous Metals, 0.5% Other Non-Ferrous Metals, 0.2% Plastic Containers, 10.1% All Other Materials, 38.3% Corrugated Cardboard, 2.9% Newspaper, 2.5% Office Paper, 10.2% Other Recyclable Paper, 3.9% C&D, 0.4%\_ Furniture, 1.1% Other Compostable Paper, 7.2% Textiles, 4.4% Aseptic Containers, 0.5% Hazardous/Special Wastes, 1.0% Yard Waste, Food Waste, 8.6% Electronics, 0.6%\_ 0.8%

# APRIL 2011 COMPOSITION OF GARBAGE DISPOSED - UNIVERSITY (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - ALL SECTORS SEPTEMBER 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Manth    | Sample 8. | Glass Food & Bevengs<br>Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metah | Plastic Containers<br>(Recyclabie) | Corrugated Cardboard | and a classic Man | Office Paper | Other Recyclable Paper | Other Compostable<br>Paper | Austrike Containers | Food Wests | Yard Weste | Electronics | Harardous/Special<br>Westee | Tediles | Curped Pedding | Fumitum | 8     | Ite  | Residue | Total  |
|----------|-----------|------------------------------------|----------------------------------------|----------------|----------------------|----------------------------|------------------------------------|----------------------|-------------------|--------------|------------------------|----------------------------|---------------------|------------|------------|-------------|-----------------------------|---------|----------------|---------|-------|------|---------|--------|
| SEP      | 1         | 10.2%                              | 1.3%                                   | 0.0%           | 3.1%                 | 1.0%                       | 3.3%                               | 6.9%                 | 2.3%              | 0.8%         | 2.6%                   | 10,7%                      | 1.4%                | 5.4%       | 2.1%       | 0.3%        | 3,2%                        | 9.2%    | 11.3%          | 0.0%    | 0.0%  | 0.0% | 24,9%   | 100.0% |
| SEP      | 2         | 18.8%                              | 0.5%                                   | 0.6%           | 0.0%                 | 1.4%                       | 4,1%                               | 2.0%                 | 0.2%              | 0.7%         | 2.5%                   | 8.9%                       | 0,7%                | 9.8%       | 0.0%       | 0.0%        | 0.3%                        | 0.3%    | 0.0%           | 0.0%    | 3.0%  | 0.0% | 46.0%   | 100.0% |
| SEP      | 3         | 1.6%                               | 1.7%                                   | 0.9%           | 0.3%                 | 0.0%                       | 9.7%                               | 8.4%                 | 3.1%              | 1.5%         | 0.0%                   | 15.1%                      | 2.0%                | 9.1%       | 5.4%       | 0.2%        | 0.0%                        | 8.9%    | 0.0%           | 0.0%    | 3.9%  | 0.0% | 28.2%   | 100.0% |
| SEP      | 5         | 2.7%                               | 0.6%                                   | 0.7%           | 4.7%                 | 0.7%                       | 5.6%                               | 12.9%                | 5.8%              | 1.7%         | 10.0%                  | 13.6%                      | 0.6%                | 6.7%       | 0.2%       | 0.1%        | 0.4%                        | 1.5%    | 0.0%           | 0.0%    | 9.2%  | 0.0% | 30 3%   | 100.0% |
| SEP      | 5         | 6.2%                               | 1.2%                                   | 0.8%           | 2.9%                 | 2.5%                       | 7.4%                               | 5.0%                 | 0.0%              | 3.6%         | 3.3%                   | 15.7%                      | 1.9%                | 16.2%      | 0.0%       | 2.8%        | 2.6%                        | 0.8%    | 0.0%           | 0.0%    | 0.9%  | 0.0% | 26.1%   | 100.0% |
| SEP      | 7         | 1.9%                               | 0.9%                                   | 4.8%           | 0.2%                 | 0.4%                       | 7.1%                               | 1.6%                 | 2.5%              | 0.9%         | 5.6%                   | 11.9%                      | 1.2%                | 7.6%       | 16,0%      | 2.0%        | 4,8%                        | 4.4%    | 0.0%           | 2.8%    | 0.7%  | 0,0% | 22.8%   | 100.0% |
| SEP      |           | 4,9%                               | 0.9%                                   | 2.0%           | 0.0%                 | 0.7%                       | 8.4%                               | 5.7%                 | 2.4%              | 3.3%         | 4.1%                   | 18.0%                      | 0.7%                | 4.1%       | 0.0%       | 0.6%        | 0.3%                        | 5.7%    | 1.0%           | 0.0%    | 0.8%  | 0.0% | 36.2%   | 100.0% |
| SEP      | 9         | 37.0%                              | 5.4%                                   | 0.0%           | 8.9%                 | 0.5%                       | 6.3%                               | 3.8%                 | 0.2%              | 0.0%         | 0.8%                   | 5.3%                       | 0.4%                | 6,7%       | 0.0%       | 0.5%        | 0.5%                        | 1.2%    | 0.0%           | 4.5%    | 0.4%  | 0.0% | 17,3%   | 100.0% |
| SEP      | 10        | 3.2%                               | 0.5%                                   | 1.1%           | 0.0%                 | 0.2%                       | 5.1%                               | 8.5%                 | 5.7%              | 9.0%         | 5.5%                   | 7.8%                       | 0.4%                | 6.1%       | 10,1%      | 2.5%        | 1.3%                        | 2.5%    | 0.0%           | 0.0%    | 0.3%  | 0.0% | 29.3%   | 100.0% |
| SEP      | 11        | 4.1%                               | 1.1%                                   | 1.7%           | 4.2%                 | 0.8%                       | 6.7%                               | 2.0%                 | 2,4%              | 0.0%         | 5.7%                   | 9.1%                       | 0.7%                | 15.5%      | 4.4%       | 0.6%        | 1.2%                        | 2.6%    | 0.3%           | 0.0%    | 0.3%  | 0.0% | 35.6%   | 100.0% |
| SEP      | 12        | 1.8%                               | 1,0%                                   | 0.0%           | 4.6%                 | 0.5%                       | 7.8%                               | 15,6%                | 1.5%              | 0.1%         | 4.8%                   | 15.9%                      | 0.3%                | 5.6%       | 0.0%       | 0.0%        | 0,0%                        | 1.5%    | 0.0%           | 0.0%    | 0.8%  | 0.0% | 37.4%   | 100.0% |
| SED      | 14        | 3.6%                               | 1 396                                  | 1.6%           | 3.7%                 | 0.9%                       | 4.076                              | 4 7%                 | 0.7%              | 1.2%         | 10.5%                  | 15.4%                      | 0.076               | 0.9%       | 1.4%       | 1.8%        | 0.7%                        | 7 0%    | 1 596          | 0.7%    | 1.3%  | 0.0% | 30.3%   | 100.0% |
| SEP      | 15        | 1.1%                               | 1.0%                                   | 1.4%           | 3.0%                 | 1.7%                       | 3.9%                               | 0.0%                 | 13.6%             | 0.5%         | 4.5%                   | 13.5%                      | 1.5%                | 4.0%       | 0.1%       | 2.3%        | 3.0%                        | 7.8%    | 0.0%           | 0.0%    | 1.9%  | 0.0% | 34.8%   | 100.0% |
| SEP      | 16        | 1,2%                               | 0,8%                                   | 2.5%           | 2.7%                 | 0.5%                       | 4.2%                               | 3.7%                 | 7.5%              | 2,8%         | 3.6%                   | 14.8%                      | 0.4%                | 7.2%       | 2.6%       | 2.0%        | 0.0%                        | 2,3%    | 0.1%           | 0.0%    | 5.9%  | 0.0% | 34.7%   | 100.0% |
| SEP      | 17        | 0.0%                               | 0.2%                                   | 0.0%           | 0.0%                 | 0.3%                       | 1.3%                               | 9.3%                 | 0.6%              | 0.0%         | 2.0%                   | 5.4%                       | 0.1%                | 42.3%      | 23,2%      | 0,2%        | 0.2%                        | 0.0%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 14.9%   | 100.0% |
| SEP      | 18        | 10.8%                              | 0.0%                                   | 1.1%           | 1.0%                 | 0,6%                       | 6.8%                               | 5.9%                 | 1.9%              | 0.1%         | 4.1%                   | 9,6%                       | 1.9%                | 1.7%       | 1.5%       | 0,8%        | 0.8%                        | 5.9%    | 1.9%           | 0.0%    | 0.0%  | 0.0% | 43.5%   | 100.0% |
| SEP      | 19        | 5.5%                               | 8.5%                                   | 0.1%           | 0.0%                 | 0,2%                       | 16.0%                              | 11.4%                | 0.0%              | 0.0%         | 0.0%                   | 10.7%                      | 0.9%                | 2.2%       | 0,0%       | 2.2%        | 0.4%                        | 2.5%    | 0.0%           | 1.3%    | 15.2% | 0.0% | 22.9%   | 100.0% |
| SEP      | 20        | 10.5%                              | 1.9%                                   | 1.8%           | 0.6%                 | 0.0%                       | 6.7%                               | 4.7%                 | 1.6%              | 4.7%         | 8.5%                   | 10.5%                      | 1.5%                | 9.4%       | 0.0%       | 1.7%        | 0.5%                        | 3.6%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 31.5%   | 100.0% |
| SEP      | 21        | 1.5%                               | 1.0%                                   | 1.3%           | 0.8%                 | 0.1%                       | 5.0%                               | 11.1%                | 2.5%              | 3,4%         | 4.1%                   | 13.7%                      | 0.8%                | B.3%       | 1,2%       | 0,2%        | 0,6%                        | 4,3%    | 1.3%           | 0.0%    | 0.0%  | 0.0% | 38.7%   | 100.0% |
| SEP      | 22        | 2.0%                               | 0.5%                                   | 2.9%           | 0.5%                 | 0.4%                       | 5.8%                               | 6.5%                 | 0.0%              | 1.4%         | 5.2%                   | 21.7%                      | 0.4%                | 10.6%      | 0.7%       | 4.3%        | 0.2%                        | 4.6%    | 0.1%           | 0.0%    | 3.1%  | 0.0% | 28.5%   | 100.0% |
| SEP      | 20        | 2.4%                               | 0.5%                                   | 1.3%           | 0.1%                 | 0.3%                       | 4.0%                               | 3 3%                 | 0.9%              | 0.9%         | 4.6%                   | 16.5%                      | 0.6%                | 9.5%       | 2.5%       | 0.9%        | 7.7%                        | 5.0%    | 0.0%           | 0.0%    | 7.4%  | 0.0% | 43.7%   | 100.0% |
| SEP      | 25        | 12.2%                              | 0.9%                                   | 1.1%           | 0.8%                 | 0.2%                       | 5.9%                               | 7.8%                 | 1.5%              | 6.0%         | 2.9%                   | 14.9%                      | 0.8%                | 10.7%      | 0.1%       | 0.0%        | 0.0%                        | 5.0%    | 2.1%           | 0.0%    | 1.3%  | 0.0% | 25.6%   | 100.0% |
| SEP      | 26        | 9.1%                               | 1.5%                                   | 1.3%           | 2.8%                 | 0.5%                       | 6.0%                               | 2.6%                 | 5.8%              | 0,2%         | 2.7%                   | 12.6%                      | 0.2%                | 3.5%       | 0.0%       | 1.2%        | 2.7%                        | 8.1%    | 2.4%           | 0.0%    | 0.8%  | 0.0% | 36.0%   | 100.0% |
| SEP      | 27        | 5.2%                               | 0,8%                                   | 1.8%           | 0.4%                 | 0.6%                       | 4.8%                               | 3.3%                 | 0.5%              | 3,3%         | 3.7%                   | 10,2%                      | 0.7%                | 7.6%       | 0.0%       | 0.3%        | 1.4%                        | 2.7%    | 0,0%           | 0.0%    | 24.8% | 0.0% | 27.8%   | 100.0% |
| SEP      | 2.8       | 1.1%                               | 0.3%                                   | 0.1%           | 0.0%                 | 0.0%                       | 8.3%                               | 6.1%                 | 5.9%              | 2.4%         | 13,6%                  | 5.4%                       | 5.1%                | 14.3%      | 0.0%       | 0.1%        | 0.0%                        | 0,2%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 37.3%   | 100.0% |
| SEP      | 29        | 18.0%                              | 3.7%                                   | 1,7%           | 0.0%                 | 0.9%                       | 13.5%                              | 2,7%                 | 0.0%              | 2.5%         | 11.3%                  | 9.0%                       | 1.2%                | 8,6%       | 0.0%       | 1.7%        | 0.0%                        | 2.6%    | 0.0%           | 0.0%    | 0.0%  | 0,0% | 22.7%   | 100.0% |
| SEP      | 30        | 0.0%                               | 0.0%                                   | 0.5%           | 0.1%                 | 0.0%                       | 1.3%                               | 8,7%                 | 0.0%              | 4.5%         | 0.1%                   | 3.5%                       | 0.0%                | 60,9%      | 0,0%       | 0.1%        | 0.0%                        | 8.0%    | 0.0%           | 0.0%    | 1.0%  | 2.0% | 9,5%    | 100.0% |
| SEP      | 31        | 8.3%                               | 0,4%                                   | 3.2%           | 1.7%                 | 3.4%                       | 7.00                               | 1 78                 | 0.3%              | 2.7%         | 7.5%                   | 4.376                      | 0,0%                | 33.34      | 0.0%       | 3.8%        | 0.0%                        | 3.3%    | 0.0%           | 0.0%    | 0.1%  | 0,0% | 41.57   | 100.0% |
| SEP      | 33        | 9.0%                               | 0.6%                                   | 1.0%           | 0.0%                 | 1.1%                       | 1.5%                               | 2.3%                 | 0.7%              | 5.7%         | 1.3%                   | 9.3%                       | 0.7%                | 25.9%      | 0.0%       | 12 0%       | 0.0%                        | 1.0%    | 0.0%           | 3.1%    | 2.6%  | 0.0% | 21.6%   | 100.0% |
| SEP      | 34        | 7.5%                               | 1.0%                                   | 0.9%           | 0.6%                 | 0.3%                       | 5.2%                               | 11.0%                | 1.7%              | 0.0%         | 7.6%                   | 16.2%                      | 0.2%                | 10.2%      | 0.0%       | 0.5%        | 0.0%                        | 2.9%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 34.0%   | 100.0% |
| SEP      | 35        | 0.9%                               | 0.2%                                   | 1.0%           | 0.0%                 | 1.5%                       | 10.4%                              | 3,2%                 | 0.3%              | 0.0%         | 1.4%                   | 11.4%                      | 1.0%                | 23.5%      | 4,2%       | 1.3%        | 0.0%                        | 0.0%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 39.5%   | 100.0% |
| SEP      | 36        | 8.6%                               | 2.3%                                   | 0.3%           | 1.6%                 | 0.5%                       | 6.2%                               | 4.1%                 | 1.9%              | 7.1%         | 12.5%                  | 16.0%                      | 0.2%                | 8.1%       | 0.0%       | 0.3%        | 0,2%                        | 5.0%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 24.9%   | 100.0N |
| SEP      | 37        | 9.6%                               | 0.8%                                   | 2.1%           | 11.2%                | 0.3%                       | 8.0%                               | 2.6%                 | 0.4%              | 0.3%         | 0,2%                   | 20.7%                      | 0.9%                | 5.2%       | 0.0%       | 2.1%        | 0.2%                        | 2,4%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 32,1%   | 100.0% |
| SEP      | 3.8       | 2.7%                               | 0.9%                                   | 0.2%           | 0,2%                 | 0.4%                       | 13.9%                              | 6.8%                 | 3.9%              | 5.0%         | 0.0%                   | 29.9%                      | 0.2%                | 6.2%       | 0.0%       | 1.2%        | 0.3%                        | 0.4%    | 0.0%           | 0.0%    | 0.6%  | 0.0% | 27.1%   | 100.0% |
| SEP      | 39        | 2.6%                               | 1.6%                                   | 1.5%           | 1.3%                 | 0.9%                       | 5.1%                               | 2.8%                 | 4.2%              | 2.8%         | 3.5%                   | 11.8%                      | 0,2%                | 23,4%      | 1,1%       | 0.0%        | 1.7%                        | 2.5%    | 1.5%           | 8.8%    | 1.8%  | 0,0% | 20.8%   | 100.0% |
| SEP      | 41        | 4 2%                               | 0.67                                   | 1.6%           | 2.0%                 | 1.6%                       | 1.090                              | 5.0%                 | S /m              | 1.1%         | 1.1%                   | 13.4%                      | 0.4%                | 15.9%      | 2.5%       | 0.0%        | 0.0%                        | 2.0%    | 0.0%           | 0.0%    | 1.4%  | 1.7% | 33.7%   | 100.0% |
| SEP      | 42        | 6.7%                               | 0.7%                                   | 1.5%           | 0.6%                 | 2.1%                       | 9.3%                               | 5.6%                 | 2.7%              | 0.8%         | 9.7%                   | 0.9%                       | 0.4%                | 4.6%       | 0.1%       | 0.3%        | 0.2%                        | 4.0%    | 1.9%           | 0.0%    | 1.5%  | 0.4% | 46.2%   | 100.0% |
| SEP      | 43        | 0.0%                               | 0.0%                                   | 0.0%           | 0.0%                 | 0.0%                       | 4.2%                               | 19.5%                | 3.5%              | 2.3%         | 0,6%                   | 19.2%                      | 2.1%                | 8.8%       | 3.0%       | 0.0%        | 0.0%                        | 0.0%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 36.5%   | 100.0% |
| SEP      | 44        | 0.0%                               | 0.3%                                   | 1.1%           | 0.0%                 | 0.3%                       | 6.9%                               | 14.0%                | 2.8%              | 0.5%         | 4.5%                   | 11.6%                      | 0.0%                | 26.9%      | 1.6%       | 0.0%        | 0.3%                        | 3,3%    | 0.0%           | 0.0%    | 0.3%  | 0.0% | 25.6%   | 100.0% |
| SEP      | 45        | 1.9%                               | 1.1%                                   | 1.6%           | 1.5%                 | 0.7%                       | 5.8%                               | 8.2%                 | 1.6%              | 1.1%         | 4,3%                   | 12.9%                      | 0,9%                | 17.6%      | 0.3%       | 0.1%        | 2.3%                        | 3.5%    | 0,0%           | 1.5%    | 2.6%  | 0.0% | 30.4%   | 100.0% |
| SEP      | 46        | 0.5%                               | 1.1%                                   | 0,5%           | 0.2%                 | 0.1%                       | 6.0%                               | 7.3%                 | 2.7%              | 11.6%        | 2.7%                   | 18.4%                      | 0.3%                | 9.7%       | 0.0%       | 0.0%        | 0.0%                        | 3.9%    | 0.0%           | 0.0%    | 0.0%  | 0.0% | 35.1%   | 100.0% |
| SEP      | 47        | 2.3%                               | 1.4%                                   | 0,9%           | 2.1%                 | 0.6%                       | 4.0%                               | 14.0%                | 0.6%              | 1.5%         | 5,3%                   | 16,6%                      | 0.0%                | 2.8%       | 0.0%       | 0.1%        | 0.4%                        | 1.8%    | 0.0%           | 0.0%    | 6,9%  | 0,0% | 38,8%   | 100.0% |
| SEP      | 48        | 1.6%                               | 1.1%                                   | 0.2%           | 0.0%                 | 0.0%                       | 3.9%                               | 7.8%                 | 0.7%              | 19,5%        | 11.8%                  | 14,5%                      | 0.1%                | 8,9%       | 0.0%       | 0.3%        | 5.6%                        | 0.3%    | 1.1%           | 0.0%    | 1.7%  | 0.0% | 20,4%   | 100.0% |
| SCR      | 49        | 1.0%                               | 1.376                                  | 2.3%           | 3.0%                 | 0.5%                       | 5.0%                               | 5.2%                 | 1.8%              | 1.9%         | 4 9%                   | 16.2%                      | 0.4%                | 13.7%      | 0.2%       | 0.1%        | 0.4%                        | 1 04    | 0.0%           | 5.6%    | 7.1%  | 0.0% | 20.27   | 100.0% |
| Walahtad | Australia | 5.7%                               | 11%                                    | 115            | 1.4%                 | 0.6%                       | 6 1%                               | 6.5%                 | 2.4%              | 2.5%         | 475                    | 13 195                     | 0.9%                | 12.0%      | 7 294      | 1 1%        | 0.5%                        | 3.0%    | 0.7%           | 0.5%    | 7 196 | 0.1% | 31 1%   | 100.0% |

### SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - ALL SECTORS (% BY WEIGHT)





# SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDUE, ALL SECTORS (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - RESIDENTIAL SEPTEMBER 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glass Food &<br>Beverage Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers<br>(Recyclable) | Corrugated<br>Cardboard | Newspaper | Office Paper | Other Recyclable<br>Paper | Other Compostable<br>Paper | Auptic Containers | Food Waste | Vard Waste | Electronics | Hazardous/Special<br>Wastes | Textiles | Carpet/ Padding | Furniture | CAD   | Tires | Residue | Total  |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|------------------------------------|-------------------------|-----------|--------------|---------------------------|----------------------------|-------------------|------------|------------|-------------|-----------------------------|----------|-----------------|-----------|-------|-------|---------|--------|
| SEP      | 1        | 10.2%                               | 1.3%                                   | 0.0%           | 3.1%                 | 1.0%                        | 3.3%                               | 6.9%                    | 2.3%      | 0.8%         | 2.6%                      | 10.7%                      | 1.4%              | 5.4%       | 2.1%       | 0.3%        | 3.2%                        | 9.2%     | 11.3%           | 0.0%      | 0.0%  | 0.0%  | 24.9%   | 100.0% |
| SEP      | 7        | 1.9%                                | 0.9%                                   | 4.8%           | 0.2%                 | 0.4%                        | 7.1%                               | 1.6%                    | 2.5%      | 0.9%         | 5.6%                      | 11.9%                      | 1.2%              | 7.5%       | 16.0%      | 2.0%        | 4.8%                        | 4.4%     | 0.0%            | 2.8%      | 0.7%  | 0.0%  | 22.8%   | 100.0% |
| SEP      | 10       | 3.2%                                | 0.5%                                   | 1.1%           | 0.0%                 | 0.2%                        | 5.1%                               | 8.5%                    | 6.7%      | 9.0%         | 5.5%                      | 7.8%                       | 0.4%              | 6.1%       | 10.1%      | 2.5%        | 1.3%                        | 2.5%     | 0.0%            | 0.0%      | 0.3%  | 0.0%  | 29.3%   | 100.0% |
| SEP      | 11       | 4.1%                                | 1.1%                                   | 1.7%           | 4,2%                 | 0.8%                        | 6.7%                               | 2.0%                    | 2.4%      | 0.0%         | 5.7%                      | 9.1%                       | 0,7%              | 15.5%      | 4.4%       | 0.6%        | 2.2%                        | 2.5%     | 0.3%            | 0.0%      | 0.3%  | 0.0%  | 35.6%   | 100.0% |
| SEP      | 13       | 4.0%                                | 0.0%                                   | 0.6%           | 3.7%                 | 0.9%                        | 4.0%                               | 1.8%                    | 0.7%      | 1.2%         | 9.1%                      | 11.8%                      | 0,6%              | 10.8%      | 6.0%       | 0.1%        | 1.1%                        | 3.6%     | 0.0%            | 0.0%      | 1.3%  | 0.2%  | 38.3%   | 100.0% |
| SEP      | 14       | 3.6%                                | 1.3%                                   | 1.6%           | 1.7%                 | 0.4%                        | 4.8%                               | 4.2%                    | 0.0%      | 1.2%         | 10.5%                     | 15.4%                      | 0.8%              | 0.9%       | 1.4%       | 1.8%        | 0.2%                        | 7.9%     | 1,5%            | 0.2%      | 0.6%  | 0.0%  | 40.0%   | 100.0% |
| SEP      | 15       | 1.1%                                | 1.0%                                   | 1.4%           | 3.0%                 | 1.7%                        | 3.9%                               | 0.0%                    | 13.6%     | 0.5%         | 4.8%                      | 13.5%                      | 1.5%              | 4.0%       | 0.1%       | 2.3%        | 3.0%                        | 7.8%     | 0.0%            | 0.0%      | 1.9%  | 0.0%  | 34.8%   | 100.0% |
| SEP      | 16       | 1.2%                                | 0.8%                                   | 2.5%           | 2.7%                 | 0.5%                        | 4.2%                               | 3.7%                    | 7.5%      | 2.8%         | 3.8%                      | 14.8%                      | 0.4%              | 7.2%       | 2.6%       | 2.0%        | 0.0%                        | 2.3%     | 0.1%            | 0.0%      | 5.9%  | 0.0%  | 34.7%   | 100.0% |
| SEP      | 21       | 1.6%                                | 1.0%                                   | 1.3%           | 0.8%                 | D.1%                        | 5.0%                               | 11.1%                   | 2.5%      | 3.4%         | 4.1%                      | 13.7%                      | 0.8%              | 8,3%       | 1.2%       | 0.2%        | 0.6%                        | 4.3%     | 1.3%            | 0.0%      | 0.0%  | 0.0%  | 38.7%   | 100.0% |
| SEP      | 23       | 7.1%                                | 0.5%                                   | 1.4%           | 0.1%                 | 0.3%                        | 8,2%                               | 4.0%                    | 1.3%      | 1.4%         | 5,1%                      | 14.1%                      | 0,8%              | 1.1%       | 0.5%       | 2.8%        | 0.2%                        | 4.8%     | D.6%            | 0.0%      | 1.8%  | 0.0%  | 43.7%   | 100.0% |
| SEP      | 24       | 2.4%                                | 0.8%                                   | 1.3%           | 0.0%                 | 0.6%                        | 4.0%                               | 3.3%                    | 0.9%      | 0.9%         | 4.6%                      | 16.5%                      | 0.4%              | 9.5%       | 2,5%       | 0.9%        | 2.2%                        | 5.0%     | 0.0%            | 0.0%      | 2.4%  | 0.4%  | 41.5%   | 100,0% |
| SEP      | 25       | 12.2%                               | 0,9%                                   | 1.1%           | 0.8%                 | 0.2%                        | 5.9%                               | 7.8%                    | 1.5%      | 6.0%         | 2.9%                      | 14.9%                      | 0.8%              | 10.7%      | 0.1%       | 0.0%        | 0.0%                        | 5.0%     | 2.1%            | 0.0%      | 1.3%  | 0.0%  | 25.6%   | 100.0% |
| SEP      | 25       | 9.1%                                | 1.5%                                   | 1.3%           | 2.8%                 | 0.5%                        | 6.0%                               | 2.6%                    | 5.8%      | 0.2%         | 2.7%                      | 12.5%                      | 0.2%              | 3.5%       | 0.0%       | 1.2%        | 2.7%                        | 8.1%     | 2.4%            | 0.0%      | 0.8%  | 0.0%  | 36.0%   | 100.0% |
| SEP      | 27       | 5.2%                                | 0.8%                                   | 1.8%           | 0.4%                 | 0.6%                        | 4.8%                               | 3.3%                    | 0.5%      | 3.3%         | 3.7%                      | 10.2%                      | 0.7%              | 7.6%       | 0.0%       | 0,3%        | 1,4%                        | 2.7%     | 0.0%            | 0.0%      | 24.8% | 0.0%  | 27.8%   | 100.0% |
| SEP      | 40       | 0.0%                                | 0.6%                                   | 1.6%           | 2.6%                 | 1.8%                        | 4.7%                               | 3.6%                    | 3.3%      | 1,1%         | 1,1%                      | 24,4%                      | 0.4%              | 15.9%      | 0.2%       | 0.0%        | 0.0%                        | 2.6%     | 0.0%            | 0.0%      | 0.4%  | 0.0%  | 35.7%   | 100,0% |
| SEP      | 41       | 4.3%                                | 0.4%                                   | 1.4%           | 0.6%                 | 0.4%                        | 1.9%                               | 5.0%                    | 5.0%      | 4.8%         | 5.5%                      | 13.4%                      | 0.4%              | 11.8%      | 2.5%       | 0.8%        | 0.2%                        | 2.9%     | 2.6%            | 0.0%      | 1.2%  | 1.2%  | 33.8%   | 100.0% |
| SEP      | 42       | 6.7%                                | 0.7%                                   | 1.5%           | 0.6%                 | 2.1%                        | 9.3%                               | 5.8%                    | 2.7%      | D.8%         | 9.2%                      | 0.9%                       | 0.4%              | 4.6%       | 0.1%       | 0.3%        | 0.2%                        | 4.0%     | 1.9%            | 0.0%      | 1.6%  | D.4%  | 46.2%   | 100.0% |
| Weighted | Average: | 4.5%                                | 0.8%                                   | 1.5%           | 1.6%                 | 0.7%                        | 5.1%                               | 4.3%                    | 3.5%      | 2.2%         | 5.4%                      | 12.8%                      | 0.7%              | 7.3%       | 2.9%       | 1.1%        | 1.3%                        | 4.9%     | 1.4%            | 0.2%      | Z.5%  | 0.2%  | 35.0%   | 100.0% |

#### SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDENTIAL (% BY WEIGHT)





### SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDUE, RESIDENTIAL (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - MULTI-FAMILY SEPTEMBER 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glass Food & Beverage<br>Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers<br>(Recyclabie) | <b>Corrugated Cardboard</b> | Newspaper | Office Paper | Other Rocyclable Paper | Other Compostable<br>Paper | Aseptic Containers | Food Weste | Yard Waste | Electronics | Hazardous/Special<br>Wastes | Textiles | Carpet/ Padding | Fumiture | CâD  | Tires | Residue | Total  |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|------------------------------------|-----------------------------|-----------|--------------|------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|----------|------|-------|---------|--------|
| SEP      | 6        | 5.2%                                | 1.2%                                   | 0.8%           | 2.9%                 | 2.5%                        | 7.4%                               | 5.0%                        | 0.0%      | 3.6%         | 3.3%                   | 15.7%                      | 1.9%               | 16.2%      | 0,0%       | 2.8%        | 2.6%                        | 0.8%     | 0.0%            | 0.0%     | 0,9% | 0.0%  | 26.1%   | 100.0% |
| SEP      | 18       | 10.8%                               | 0.0%                                   | 1.1%           | 1.0%                 | 0.6%                        | 6.8%                               | 5.9%                        | 1.9%      | 0.1%         | 4.1%                   | 9.6%                       | 1.9%               | 1.7%       | 1.5%       | 0.8%        | 0.6%                        | 5.9%     | 1.9%            | 0.0%     | 0.0% | 0.0%  | 43.6%   | 100.0% |
| SEP      | 20       | 10.5%                               | 1,9%                                   | 1.8%           | 0.6%                 | 0.0%                        | 6.7%                               | 4.7%                        | 1.6%      | 4.7%         | 8.8%                   | 10.5%                      | 1.5%               | 9.4%       | 0.0%       | 1.7%        | 0.5%                        | 3.5%     | 0.0%            | 0.0%     | 0.0% | 0.0%  | 31.5%   | 100.0% |
| SEP      | 32       | 8.0%                                | 1.1%                                   | 2,2%           | 2.7%                 | 1.4%                        | 7.9%                               | 1.7%                        | 0.3%      | 2.2%         | 3.2%                   | 15,2%                      | 0.5%               | 22.2%      | 0.0%       | 2.8%        | 0.0%                        | 2.2%     | 0.0%            | 0.0%     | 0.9% | 0.0%  | 25.4%   | 100.09 |
| SEP      | 36       | 8.6%                                | 2.3%                                   | 0.3%           | 1.6%                 | 0.5%                        | 6.2%                               | 4.1%                        | 1.9%      | 7.1%         | 12.8%                  | 16.0%                      | 0.2%               | 8.1%       | 0.0%       | 0,3%        | 0.2%                        | 5.0%     | 0.0%            | 0,0%     | 0.0% | 0.0%  | 24.9%   | 100.0% |
| SEP      | 37       | 9.6%                                | 0.8%                                   | 2.1%           | 11.2%                | 0.3%                        | 8.0%                               | 2.6%                        | 0.4%      | 0.3%         | 0.2%                   | 20.7%                      | 0.9%               | 6.2%       | 0.0%       | 2.1%        | 0.2%                        | 2.4%     | 0.0%            | 0.0%     | 0.0% | 0.0%  | 32.1%   | 100.0% |
| Weighted | Average: | 9.3%                                | 1.1%                                   | 1.4%           | 2.9%                 | 0.8%                        | 7.1%                               | 4.3%                        | 1.2%      | 2.7%         | 5.4%                   | 13.8%                      | 1.2%               | 9.4%       | 0.4%       | 1.6%        | 0.7%                        | 3.7%     | 0.5%            | 0.0%     | 0.3% | 0.0%  | 32.3%   | 100.0% |

## SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - MULTI-FAMILY (% BY WEIGHT)





## SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDUE, MULTI-FAMILY (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - RURAL WASTE SERVICE CENTERS SEPTEMBER 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glass Food & Beverage<br>Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Contelners<br>(Recyclable) | Corrugated Cardboard | Newspaper | Office Paper | Other Recyclable Paper | Other Compostable<br>Paper | Aseptic Containers | Food Waste | Yard Waste | Electronics | Hazardous/Special<br>Wastes | Textiles | Carpet/ Padding | Fumiture | C&D  | Tires | Residue | Total  |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|------------------------------------|----------------------|-----------|--------------|------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|----------|------|-------|---------|--------|
| SEP      | 7        | 1.9%                                | 0.9%                                   | 4.8%           | 0.2%                 | 0.4%                        | 7.1%                               | 1.6%                 | 2.5%      | 0.9%         | 5.6%                   | 11.9%                      | 1.2%               | 7.6%       | 16.0%      | 2.0%        | 4.8%                        | 4.4%     | 0.0%            | 2.8%     | 0.7% | 0.0%  | 22.8%   | 100.0% |
| SEP      | 26       | 9.1%                                | 1.5%                                   | 1.3%           | 2.8%                 | 0.5%                        | 6.0%                               | 2.6%                 | 5.8%      | 0.2%         | 2.7%                   | 12.6%                      | 0.2%               | 3.5%       | 0.0%       | 1.2%        | 2.7%                        | 8.1%     | 2.4%            | 0.0%     | 0.8% | 0.0%  | 36.0%   | 100.0% |
| Weighted | Average: | 5.7%                                | 1.2%                                   | 3.0%           | 1.6%                 | 0.4%                        | 6.5%                               | 2,1%                 | 4.2%      | 0.6%         | 4.1%                   | 12.2%                      | 0.7%               | 5.4%       | 7.5%       | 1.5%        | 3.7%                        | 6.4%     | 1.3%            | 1.3%     | 0.7% | 0.0%  | 29.8%   | 100.0% |



#### SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RURAL WASTE SERVICE CENTERS (% BY WEIGHT)



# SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDUE, RURAL WASTE SERVICE CENTERS (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - COMMERCIAL SEPTEMBER 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glass Food & Beverage<br>Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers<br>(Recyclable) | Corrugated Cardboard | Newspaper | Office Paper | Other Recyclable Paper | Other Compostable<br>Paper | Aseptic Containers | Food Weste | Yard Wasto | Electronics | Hazardous/Special<br>Westes | Textiles | Carpet/ Padding | Furmiture | CAD   | Three | Residue | Total  |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|------------------------------------|----------------------|-----------|--------------|------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|----------|-----------------|-----------|-------|-------|---------|--------|
| SEP      | 2        | 18.8%                               | 0.5%                                   | 0.8%           | 0.0%                 | 1.4%                        | 4.1%                               | 2.0%                 | 0.2%      | 0.7%         | 2.5%                   | 8.9%                       | 0.7%               | 9.8%       | 0.0%       | 0.0%        | 0.3%                        | 0.3%     | 0.0%            | 0.0%      | 3.0%  | 0.0%  | 45.0%   | 100.0% |
| SEP      | 3        | 1.6%                                | 1.7%                                   | 0.9%           | 0.3%                 | 0.0%                        | 9.7%                               | 8.4%                 | 3.1%      | 1.5%         | 0.0%                   | 15.1%                      | 2.0%               | 9.1%       | 5.4%       | D.2%        | 0.0%                        | 8.9%     | 0.0%            | 0.0%      | 3.9%  | 0.0%  | 28.2%   | 100.0% |
| SEP      | 4        | 0.3%                                | 1.2%                                   | 1.3%           | 0.7%                 | 0.7%                        | 14.1%                              | 3.0%                 | 2.8%      | 5.2%         | 2.7%                   | 22.2%                      | 1.2%               | 10.7%      | 0.0%       | 0.1%        | 0.4%                        | 2.2%     | 0.0%            | 0.0%      | 4.2%  | 0.0%  | 26.9%   | 100.0% |
| SEP      | 5        | 2.7%                                | 0.6%                                   | 0.7%           | 4.7%                 | 0.7%                        | 6.6%                               | 12.9%                | 5.8%      | 1.7%         | 10.0%                  | 13.4%                      | 0,6%               | 6.2%       | 0.2%       | 0.8%        | 0.2%                        | 1.5%     | 0.0%            | 0.0%      | 0.5%  | 0.0%  | 30.3%   | 100.0% |
| SEP      | 6        | 6.2%                                | 1.2%                                   | 0.8%           | 2.9%                 | 2.5%                        | 7.4%                               | 5.0%                 | 0.0%      | 3.6%         | 3.3%                   | 15.7%                      | 1.9%               | 16.2%      | 0.0%       | 2.8%        | 2.6%                        | 0.8%     | 0.0%            | 0.0%      | 0.9%  | 0.0%  | 26.1%   | 100.0% |
| SEP      | 8        | 4.9%                                | 0.9%                                   | 2.0%           | 0.0%                 | 0.7%                        | 8.4%                               | 5.7%                 | 2.4%      | 3.3%         | 4.1%                   | 18.0%                      | 0.7%               | 4.1%       | 0,0%       | 0.6%        | 0.3%                        | 5.7%     | 1.0%            | 0.0%      | 0.8%  | 0.0%  | 36,2%   | 100.0% |
| SEP      | 9        | 37.0%                               | 5.4%                                   | 0.0%           | 8.9%                 | 0.9%                        | 6.3%                               | 3.8%                 | 0.2%      | 0.0%         | 0.8%                   | 5.3%                       | 0.4%               | 6.7%       | 0.0%       | 0.5%        | 0.5%                        | 1.2%     | 0.0%            | 4.5%      | 0.4%  | 0.0%  | 17.3%   | 100.0% |
| SEP      | 12       | 1.8%                                | 1.0%                                   | 0.0%           | 4.6%                 | 0.5%                        | 7.8%                               | 15.6%                | 1.5%      | 0.1%         | 4.8%                   | 15.9%                      | 0.3%               | 6.6%       | 0.0%       | 0.0%        | 0.0%                        | 1.5%     | 0.0%            | 0.0%      | 0.8%  | 0.0%  | 37.4%   | 100.0% |
| SEP      | 17       | 0.0%                                | 0.2%                                   | 0.0%           | 0.0%                 | 0.3%                        | 1.3%                               | 9.3%                 | 0.6%      | 0.0%         | 2.0%                   | 5.4%                       | 0.1%               | 42.3%      | 23.2%      | 0.2%        | 0.2%                        | 0.0%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 14.9%   | 100.0% |
| SEP      | 18       | 10.8%                               | 0.0%                                   | 1.1%           | 1.0%                 | 0.6%                        | 6.8%                               | 5.9%                 | 1.9%      | 0.1%         | 4.1%                   | 9.6%                       | 1,9%               | 1.7%       | 1.5%       | 0.8%        | 0.8%                        | 5.9%     | 1.9%            | 0.0%      | 0.0%  | 0.0%  | 43.6%   | 100,0% |
| SEP      | 19       | 5.5%                                | 8.5%                                   | 0.1%           | 0.0%                 | 0.2%                        | 16.0%                              | 11.4%                | 0.0%      | 0.0%         | 0.0%                   | 10.7%                      | 0.9%               | 2.2%       | 0.0%       | 2.2%        | 0.4%                        | 2.5%     | 0.0%            | 1.3%      | 15.2% | 0.0%  | 22.9%   | 100.0% |
| SEP      | 20       | 10.5%                               | 1,9%                                   | 1.8%           | 0.6%                 | 0.0%                        | 6.7%                               | 4.7%                 | 1.6%      | 4.7%         | 8.8%                   | 10.5%                      | 1.5%               | 9.4%       | 0.0%       | 1.7%        | 0.5%                        | 3.6%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 31.5%   | 100.0% |
| SEP      | 22       | 2.0%                                | 0.8%                                   | 2.9%           | 0.6%                 | 0.4%                        | 5.8%                               | 6.5%                 | 0.0%      | 1.4%         | 5.2%                   | 21.7%                      | 0.4%               | 10.6%      | 0.7%       | 4.3%        | 0.2%                        | 4.6%     | 0.1%            | 0.0%      | 3.1%  | 0.0%  | 28.6%   | 100.0% |
| SEP      | 28       | 1.1%                                | 0.3%                                   | 0.1%           | 0.0%                 | 0.0%                        | 8.3%                               | 5.1%                 | 5.9%      | 2.4%         | 13.6%                  | 5,4%                       | 5.1%               | 14.3%      | 0.0%       | 0.1%        | 0.0%                        | 0.2%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 37.3%   | 100.0% |
| SEP      | 29       | 18.0%                               | 3.7%                                   | 1.7%           | 0.0%                 | 0.9%                        | 13.5%                              | 2.7%                 | 0.0%      | 2.5%         | 11.3%                  | 9,0%                       | 1.2%               | 8.6%       | 0.0%       | 1.7%        | 0.0%                        | 2,6%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 22.7%   | 100.0% |
| SEP      | 30       | 0.0%                                | 0.0%                                   | 0.5%           | 0,1%                 | 0.0%                        | 1.3%                               | 8,7%                 | 0.0%      | 4.5%         | 0.1%                   | 3,5%                       | 0.0%               | 60.9%      | 0.0%       | 0.1%        | 0.0%                        | 8.0%     | 0.0%            | 0.0%      | 1.0%  | 2.0%  | 9.5%    | 100.0% |
| SEP      | 31       | 8.3%                                | 0.4%                                   | 0.0%           | 0.0%                 | 0.0%                        | 12.8%                              | 24.3%                | 0.0%      | 0.0%         | 7.9%                   | 4.3%                       | 0.0%               | 0.2%       | 0.0%       | 0.0%        | 0.0%                        | 0.0%     | 0.0%            | 0.0%      | 0.1%  | 0.0%  | 41.8%   | 100.0% |
| SEP      | 32       | 8.0%                                | 1.1%                                   | 2.2%           | 2.7%                 | 1.4%                        | 7.9%                               | 1.7%                 | 0.3%      | 2.2%         | 3.2%                   | 15.2%                      | 0.5%               | 22.2%      | 0.0%       | 2.8%        | 0.0%                        | 2.2%     | 0,0%            | 0.0%      | 0.9%  | 0.0%  | 25.4%   | 100.0% |
| SEP      | 33       | 9.4%                                | 0.6%                                   | 1.0%           | 0.0%                 | 1.1%                        | 1.8%                               | 2.3%                 | 0.7%      | 5.2%         | 1.3%                   | 9.3%                       | 0.7%               | 25.9%      | 0.0%       | 12.0%       | 0.0%                        | 1.0%     | 0.0%            | 3.1%      | 2.8%  | 0.0%  | 21.6%   | 100.0% |
| SEP      | 34       | 7.5%                                | 1.0%                                   | 0.9%           | 0.6%                 | 0.3%                        | 5.2%                               | 11.0%                | 1.7%      | 0.0%         | 7.6%                   | 16.2%                      | 0.2%               | 10.2%      | 0.0%       | 0.5%        | 0.0%                        | 2.9%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 34.0%   | 100.0% |
| SEP      | 35       | 0.9%                                | 0.2%                                   | 1.0%           | 0.0%                 | 1.8%                        | 10.4%                              | 3.2%                 | 0.3%      | 0.0%         | 1.4%                   | 11,4%                      | 1.0%               | 23.5%      | 4.2%       | 1.3%        | 0.0%                        | 0.0%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 39.5%   | 100.0% |
| SEP      | 36       | 8.6%                                | 2.3%                                   | 0.3%           | 1.6%                 | 0.5%                        | 6.2%                               | 4.1%                 | 1.9%      | 7.1%         | 12.8%                  | 16.0%                      | 0.2%               | 8.1%       | 0.0%       | 0.3%        | 0.2%                        | 5.0%     | 0.0%            | 0.0%      | 0,0%  | 0.0%  | 24.9%   | 100.0% |
| SEP      | 37       | 9.6%                                | 0.8%                                   | 2.1%           | 11.2%                | 0.3%                        | 8.0%                               | 2.6%                 | 0.4%      | 0.3%         | 0.2%                   | 20.7%                      | 0.9%               | 6.2%       | 0.0%       | 2.1%        | 0.2%                        | 2.4%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 32.1%   | 100.0% |
| SEP      | 38       | 2.7%                                | 0.9%                                   | 0.2%           | 0.2%                 | 0.4%                        | 13.9%                              | 6.8%                 | 3.9%      | 5.0%         | 0.0%                   | 29.9%                      | 0.2%               | 6.2%       | 0.0%       | 1.2%        | 0.3%                        | 0.4%     | 0.0%            | 0.0%      | 0.6%  | 0.0%  | 27.1%   | 100.0% |
| SEP      | 39       | 2.6%                                | 1.8%                                   | 1.6%           | 1.3%                 | 0.9%                        | 5.1%                               | 2.8%                 | 4.2%      | 2.8%         | 3.5%                   | 11.8%                      | 0.2%               | 23.4%      | 1.1%       | 0.0%        | 1.7%                        | 2.5%     | 1.5%            | 8.8%      | 1.8%  | 0.0%  | 20,8%   | 100.0% |
| SEP      | 43       | 0.0%                                | 0.0%                                   | 0.0%           | 0.0%                 | 0.0%                        | 4.2%                               | 19.8%                | 3.5%      | 2.3%         | 0.6%                   | 19,2%                      | 2.1%               | 8,8%       | 3,0%       | 0.0%        | 0.0%                        | 0.0%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 36.5%   | 100.0% |
| SEP      | 44       | 0.0%                                | 0.3%                                   | 1.1%           | 0.0%                 | 0.3%                        | 6.9%                               | 14.0%                | 2.8%      | 0.5%         | 4.5%                   | 11.5%                      | 0.0%               | 26.9%      | 1.5%       | 0.0%        | 0.3%                        | 3.3%     | 0.0%            | 0.0%      | 0.3%  | 0.0%  | 25.6%   | 100.0% |
| SEP      | 45       | 1.9%                                | 1.1%                                   | 1.6%           | 1.5%                 | 0.7%                        | 5.8%                               | 8.2%                 | 1.5%      | 1.1%         | 4.3%                   | 12.9%                      | 0.9%               | 17.6%      | 0.3%       | 0,1%        | 2.3%                        | 3.5%     | 0.0%            | 1.5%      | 2.6%  | 0.0%  | 30.4%   | 100.0% |
| SEP      | 46       | 0.5%                                | 1.1%                                   | 0.5%           | 0.2%                 | 0.1%                        | 6.0%                               | 7.3%                 | 2.7%      | 11.6%        | 2.7%                   | 18.4%                      | 0.3%               | 9.7%       | 0.0%       | 0.0%        | 0.0%                        | 3.9%     | 0.0%            | 0.0%      | 0.0%  | 0.0%  | 35.1%   | 100.0% |
| SEP      | 47       | 2.3%                                | 1.4%                                   | 0,9%           | 2.1%                 | 0.6%                        | 4.0%                               | 14.0%                | 0.6%      | 1.5%         | 5.3%                   | 16.6%                      | 0.0%               | 2.8%       | 0.0%       | 0.1%        | 0.4%                        | 1.8%     | 0.0%            | 0.0%      | 6.9%  | 0.0%  | 38.8%   | 100.0% |
| SEP      | 48       | 1.6%                                | 1.1%                                   | 0.2%           | 0.0%                 | 0.0%                        | 3.9%                               | 7.8%                 | 0.7%      | 19.6%        | 11.8%                  | 14.6%                      | 0.1%               | 8.9%       | 0.0%       | 0.3%        | 5.6%                        | 0.3%     | 1.1%            | 0.0%      | 1.7%  | 0.0%  | 20.4%   | 100.0% |
| SEP      | 49       | 5.0%                                | 1.3%                                   | 1.4%           | 0.7%                 | 0.5%                        | 5.5%                               | 3.2%                 | 1.4%      | 1.4%         | 5.2%                   | 18,2%                      | 1.0%               | 24.7%      | 0.1%       | 0.1%        | 0.4%                        | 3.7%     | 0,0%            | 0.0%      | 0.0%  | 0.0%  | 26.2%   | 100,0% |
| SEP      | 50       | 2.9%                                | 1.9%                                   | 2.3%           | 2.9%                 | 0.4%                        | 5.0%                               | 8.1%                 | 1.8%      | 1.9%         | 4.9%                   | 16.2%                      | 0.4%               | 13.7%      | 0.2%       | 0.1%        | 0.3%                        | 1.9%     | 0.0%            | 5.6%      | 7.1%  | 0.0%  | 22.5%   | 100.0% |
| Weighted | Average: | 5.6%                                | 1.2%                                   | 0.9%           | 1.3%                 | 0.5%                        | 6.7%                               | 7.9%                 | 1.7%      | 2.7%         | 4.3%                   | 13.3%                      | 0.8%               | 15.4%      | 2.0%       | 1.1%        | 0.5%                        | 2.5%     | 0.2%            | 0.8%      | 1.7%  | 0.1%  | 28.9%   | 100.0% |



# SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - COMMERCIAL (% BY WEIGHT)



# SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDUE, COMMERCIAL (% BY WEIGHT)

#### INDIVIDUAL SAMPLE RESULTS - UNIVERSITY SEPTEMBER 2011 INDIVIDUAL SAMPLE RESULTS (% BY WEIGHT)

| Month    | Sample # | Glass Food & Beverage<br>Containers | Aluminum Food &<br>Beverage Containers | Tin/Steel Cans | Other Ferrous Metals | Other Non-Ferrous<br>Metals | Plastic Containers<br>(Recyclable) | Corrugated Cardboard | Newspaper | Office Paper | Other Recyclable Paper | Other Compostable<br>Paper | Aseptic Containers | Food Waste | Yard Waste | Electronics | Hazardous/Special<br>Wastes | Textles | Carpet/ Padding | Fumiture | C&D  | Tires | Residue | Total  |
|----------|----------|-------------------------------------|----------------------------------------|----------------|----------------------|-----------------------------|------------------------------------|----------------------|-----------|--------------|------------------------|----------------------------|--------------------|------------|------------|-------------|-----------------------------|---------|-----------------|----------|------|-------|---------|--------|
| SEP      | 4        | 0.3%                                | 1.2%                                   | 1.3%           | 0.7%                 | 0.7%                        | 14.1%                              | 3.0%                 | 2.8%      | 5.2%         | 2.7%                   | 22.2%                      | 1.2%               | 10.7%      | 0.0%       | 0.1%        | 0.4%                        | 2.2%    | 0.0%            | 0.0%     | 4.2% | 0.0%  | 26.9%   | 100.0% |
| SEP      | 9        | 37.0%                               | 5.4%                                   | 0.0%           | B.9%                 | 0.9%                        | 6.3%                               | 3.8%                 | 0.2%      | 0.0%         | 0.8%                   | 5.3%                       | 0.4%               | 6.7%       | 0.0%       | 0.5%        | 0.5%                        | 1.2%    | 0.0%            | 4.5%     | 0.4% | 0.0%  | 17.3%   | 100.0% |
| SEP      | 35       | 0.9%                                | 0.2%                                   | 1.0%           | 0.0%                 | 1.8%                        | 10.4%                              | 3.2%                 | 0.3%      | 0.0%         | 1.4%                   | 11.4%                      | 1.0%               | 23.5%      | 4.2%       | 1.3%        | 0.0%                        | 0.0%    | 0.0%            | 0.0%     | 0.0% | 0.0%  | 39.5%   | 100.0% |
| Weighted | Average: | 15.4%                               | 2.7%                                   | 0.7%           | 3.8%                 | 1.0%                        | 10.0%                              | 3.4%                 | 1.1%      | 1.8%         | 1.6%                   | 12.6%                      | 0.8%               | 12.2%      | 1.0%       | 0.6%        | 0.4%                        | 1.3%    | 0.0%            | 1.8%     | 1.6% | 0.0%  | 26.1%   | 100.0% |

## SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - UNIVERSITY (% BY WEIGHT)



### SEPTEMBER 2011 COMPOSITION OF GARBAGE DISPOSED - RESIDUE, UNIVERSITY (% BY WEIGHT)

