

2015-2016 WASHINGTON STATEWIDE
Waste Characterization Study
State of Washington Department of Ecology

Publication 16-07-032

Published October 2016 – Updated January 2018



Acknowledgments

To the management and staff in the following counties and waste facilities who invited us into their places of work and allowed us to carry out the fieldwork that resulted in this report, we thank you for making this study possible.

Chelan County

Clallam County

Cowlitz County

Franklin County

Grant County

Grays Harbor County

Kitsap County

Lewis County

Skagit County

Spokane County

Wenatchee Landfill and Transfer Station

Port Angeles Transfer Station

Waste Control 3rd Ave Transfer Station

BDI Transfer Station

Ephrata Landfill

Aberdeen Central Transfer Station

Olympic View Transfer Station

Lewis County Central Transfer Station

Skagit County Recycling and Transfer Station

Spokane Regional Waste to Energy Facility

We also appreciate the staff from the following jurisdictions who willingly made their recent waste characterization data available to us:

King County

Clark County

Thurston County

Pierce County

City of Seattle

City of Tacoma

Accommodation Requests:

To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6900 or visit <https://ecology.wa.gov/accessibility>. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Table of Contents

Acknowledgments	I
List of Tables	III
List of Figures	V
1. Introduction	1
Key Findings.....	1
2. Study Planning and Collection Approach	3
Selecting Representative Counties.....	3
Scheduling Surveying and Sampling Facilities.....	5
Defining Waste Sectors.....	5
Creating the List of Material Types.....	6
Determining the Composition of the Statewide Waste Stream.....	8
Quantifying the Waste Stream.....	8
Interpreting the Results.....	10
3. Statewide Characterization Results	12
Overall Disposed Waste Stream.....	12
Commercial Waste.....	17
Residential Waste.....	21
Self-hauled C&D Waste.....	25
Self-hauled Other Waste.....	29
4. Comparisons to the Previous Study	33
Appendix A: Detailed Methodology	35
Appendix B: List and Definitions of Material Types	62
Appendix C: Forms Used During the Study	81
Appendix D: Waste Generation Area Composition Results	88
Appendix E: Supplemental Composition Results	127

List of Tables

Table 1: Waste Generation Areas and Counties Included in the 2015-2016 Statewide Study and Supplemental Analysis	4
Table 2: Counties and Facilities Visited for Sampling and Surveying	5
Table 3: Numbers of Waste Samples Characterized, by Sector	6
Table 4: Number of Material Types per Material Class	7
Table 5: The Eight Material Classes Used for the Packaging and Product Analysis	8
Table 6: Estimated Tons of Disposed Waste by Sector	9
Table 7: Overall Statewide Disposed Waste Stream Fifteen Most Prevalent Material Types, 2015-2016	15
Table 8: Overall Statewide Disposed Waste Stream, Detailed Composition, 2015-2016	16
Table 9: Commercial Disposed Waste Sector Fifteen Most Prevalent Material Types, 2015-2016	19
Table 10: Commercial Disposed Waste Sector, Detailed Composition, 2015-2016	20
Table 11: Residential Disposed Waste Sector Fifteen Most Prevalent Material Types, 2015-2016	23
Table 12: Residential Disposed Waste Sector, Detailed Composition, 2015-2016	24
Table 13: Self-hauled C&D Disposed Waste Sector Fifteen Most Prevalent Material Types, 2015-2016	27
Table 14: Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016	28
Table 15: Self-hauled Other Disposed Waste Sector Fifteen Most Prevalent Material Types, 2015-2016	31
Table 16: Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016	32
Table 17: Waste Composition Changes and Trends, 2009 vs. 2015-2016	34
Table 18: Counties and Facilities Visited for Sampling	37
Table 19: Sampling Calendar	38
Table 20: Counties Included in Each Waste Generation Area	39
Table 21: Planned vs. Actual Sample Counts	40
Table 22: Vehicle Surveys Conducted, by County and Facility	44
Table 23: Annual Disposed Tonnage by Waste Generation Area 2014	48
Table 24: T-test Material Groupings	54
Table 25: List of Material Types	63
Table 26: Material Types by Packaging and Products Material Groups	66
Table 27: Central WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016	92
Table 28: Central WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016	93
Table 29: Central WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016	94
Table 30: Central WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016	95
Table 31: Central WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016	96
Table 32: East WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016	98
Table 33: East WGA Commercial Disposed Waste, Detailed Composition, 2015-2016	99
Table 34: East WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016	100
Table 35: East WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016	101
Table 36: East WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016	102
Table 37: Northwest WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016	104
Table 38: Northwest WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016	105
Table 39: Northwest WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016	106
Table 40: Northwest WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016	107
Table 41: Northwest WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016	108
Table 42: Puget Sound WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016	110
Table 43: Puget Sound WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016	111
Table 44: Puget Sound WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016	112
Table 45: Puget Sound WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016	113
Table 46: Puget Sound WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016	114

Table 47: Southwest WGA Overall Disposed Waste Sector, Detailed Composition, 2015-2016 116

Table 48: Southwest WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016 117

Table 49: Southwest WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016..... 118

Table 50: Southwest WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016 119

Table 51: Southwest WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016 120

Table 52: West WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016..... 122

Table 53: West WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016..... 123

Table 54: West WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016..... 124

Table 55: West WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016 125

Table 56: West WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016..... 126

Table 57: Supplemental Statewide Results—Eight-Study Material Type Translation 129

Table 58: Supplemental Statewide Results—Overall Statewide Disposed Waste Stream Ten Most Prevalent Material Types, 2015-2016..... 139

Table 59: Supplemental Statewide Results—Overall Statewide Disposed Waste Stream Detailed Composition, 2015-2016..... 140

Table 60: Supplemental Statewide Results—Statewide Commercial Disposed Waste Sector Ten Most Prevalent Material Types, 2015-2016..... 142

Table 61: Supplemental Statewide Results—Statewide Commercial Disposed Waste Sector Detailed Composition, 2015-2016 143

Table 62: Supplemental Statewide Results—Statewide Residential Disposed Waste Sector Ten Most Prevalent Material Types, 2015-2016..... 145

Table 63: Supplemental Statewide Results—Statewide Residential Disposed Waste Sector Detailed Composition, 2015-2016..... 146

Table 64: Supplemental Statewide Results—Statewide Self-hauled Disposed Waste Sector Ten Most Prevalent Material Types, 2015-2016..... 148

Table 65: Supplemental Statewide Results—Statewide Self-hauled Disposed Waste Sector Detailed Composition, 2015-2016..... 149

List of Figures

Figure 1: Overall Statewide Disposed Waste Stream Composition by Material Class, 2015-2016	2
Figure 2: Commercial Waste Sector	2
Figure 3: Residential Waste Sector	2
Figure 4: Self-hauled C&D Waste Sector	2
Figure 5: Self-hauled Other Waste Sector	2
Figure 6: Map of Waste Generation Areas	4
Figure 7: Overall Statewide Disposed Waste Stream Composition by Material Class, 2015-2016	13
Figure 8: Overall Statewide Disposed Waste Stream Composition by Material Class, Combined Packaging and Products, 2015-2016	13
Figure 9: Overall Statewide Disposed Waste Stream Packaging, Products, and Other Material Groups, 2015-2016.....	14
Figure 10: Commercial Disposed Waste Sector Composition by Material Class, 2015-2016.....	17
Figure 11: Commercial Disposed Waste Sector Composition by Material Class, Combined Packaging and Products, 2015-2016.....	18
Figure 12: Commercial Disposed Waste Sector Packaging, Products, and Other Material Groups, 2015-2016.....	18
Figure 13: Residential Disposed Waste Sector Composition by Material Class, 2015-2016.....	21
Figure 14: Residential Disposed Waste Sector Composition by Material Class, Combined Packaging and Products, 2015-2016.....	22
Figure 15: Residential Disposed Waste Sector Packaging, Products, and Other Material Groups, 2015-2016.....	22
Figure 16: Self-hauled C&D Disposed Waste Sector Composition by Material Class, 2015-2016.....	25
Figure 17: Self-hauled C&D Disposed Waste Sector Composition by Material Class, Combined Packaging and Products, 2015-2016	26
Figure 18: Self-hauled C&D Disposed Waste Sector Packaging, Products, and Other Material Groups, 2015-2016.....	26
Figure 19: Self-hauled Other Disposed Waste Sector Composition by Material Class, 2015-2016.....	29
Figure 20: Self-hauled Other Disposed Waste Sector Composition by Material Class, Combined Packaging and Products, 2015-2016	30
Figure 21: Self-hauled Other Disposed Waste Sector Packaging, Products, and Other Material Groups, 2015-2016.....	30
Figure 22: Map of Waste Generation Areas.....	39
Figure 23: The 16-Cell Grid as Applied to a Tipped Load.....	41
Figure 24: Example Flexible Plastic Packaging.....	72
Figure 25: Vehicle Selection Sheet.....	82
Figure 26: Sample Placard.....	83
Figure 27: Sample Sorting and Characterization Form, Front.....	84
Figure 28: Sample Sorting and Characterization Form, Back.....	85
Figure 29: Vehicle Survey Form, Front	86
Figure 30: Vehicle Survey Form, Back.....	87
Figure 31: Central WGA.....	89
Figure 32: East WGA	89
Figure 33: Northwest WGA.....	89
Figure 34: Puget Sound WGA.....	89
Figure 35: Southwest WGA.....	90
Figure 36: West WGA	90
Figure 37: Supplemental Statewide Results—Overall Statewide Disposed Waste Stream Composition by Material Class, 2015-2016	138
Figure 38: Supplemental Statewide Results—Statewide Commercial Disposed Waste Sector Composition by Material Class, 2015-2016	141
Figure 39: Supplemental Statewide Results—Statewide Residential Disposed Waste Sector Composition by Material Class, 2015-2016	144

Figure 40: Supplemental Statewide Results—Statewide Self-hauled Disposed Waste Sector Composition by Material Class, 2015-2016147

1. Introduction

The Washington State Department of Ecology (Ecology) commissioned Cascadia Consulting Group (Cascadia) to conduct a four-season municipal solid waste (MSW) characterization study during 2015-2016. The purpose of this study was to support the State Solid and Hazardous Waste Plan, “Moving Washington Beyond Waste and Toxics” and conduct an in-depth examination of the materials and resources currently being disposed throughout the state.

This study incorporated four additional analysis tasks, specifically:

- A packaging versus product analysis which group each of the 156 material types into packaging, products, or one of six other material groups.
- Detailed composition results for each of the State’s six waste generation areas (WGAs)—Central, East, Northwest, Puget Sound, Southwest, and West.
- A comparison with the 2009 Washington Statewide Waste Characterization Study.
- A supplementary analysis which combines the data collected as part of this study with an additional seven studies completed by other jurisdictions around the state.

Ecology will be able to use the data collected in this study to assist municipalities as well as public and private solid waste managers to design targeted material recovery programs. These programs will move beyond material disposal to managing materials with environmental impacts in mind and ultimately to a healthier Washington State.

Key Findings

As a preliminary look at the statewide data, Figure 1 through Figure 5 display the composition estimates, by material class, for the overall waste stream and each of the four studied waste sectors. As shown disposed Organics is considerably higher in the residential waste sector (43%) than in the commercial sector (27%) and makes up nearly 30 percent of Washington’s overall disposed waste stream. Paper (combining products and packaging) and Plastic (combining products and packaging) occur in similar proportions in the commercial and residential sectors.

Not surprisingly, Construction Materials and Wood Debris are found in the highest proportions in the self-hauled C&D waste sector. Among the waste hauled by contracted or municipal vehicles, Construction Materials is found in much higher proportions in the commercial sector (7%) than in the residential sector (2%). Consumer Products are found in higher proportions (17%) in self-hauled other waste than in any other sector.

A comprehensive analysis of the overall waste stream and the commercial, residential, and self-hauled sectors will be addressed below in Section 3: Statewide Characterization Results.

Classes vs. Types

For the sake of clarity, broad categories such as Paper Products, Glass, and Metal will be capitalized while material types such as *newspaper*, *clear glass containers*, and *tin cans* will be italicized.

Figure 1: Overall Statewide Disposed Waste Stream Composition by Material Class, 2015-2016

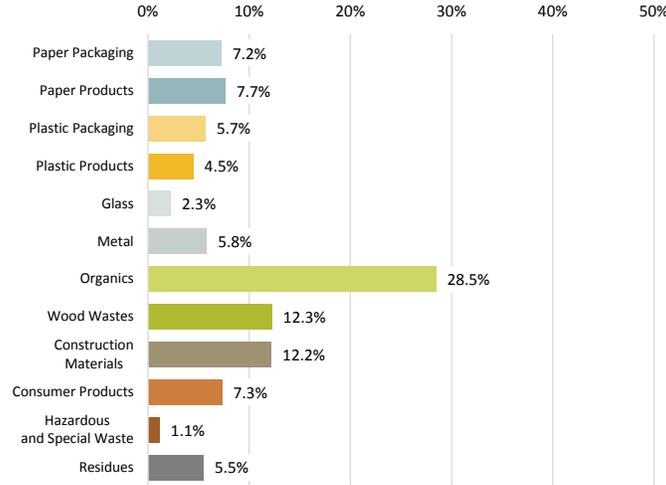


Figure 2: Commercial Waste Sector

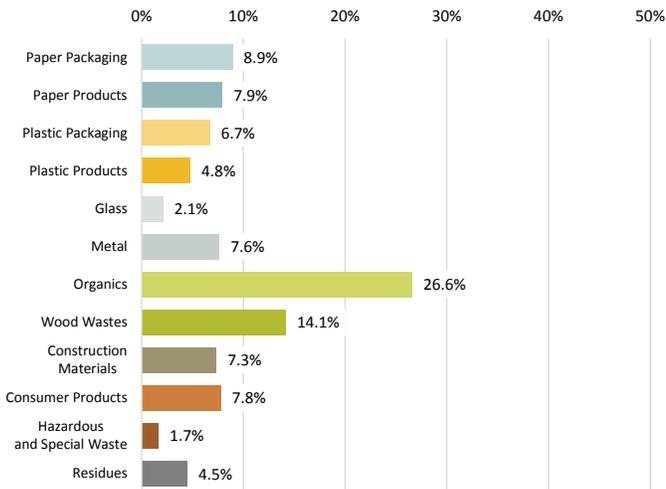


Figure 3: Residential Waste Sector

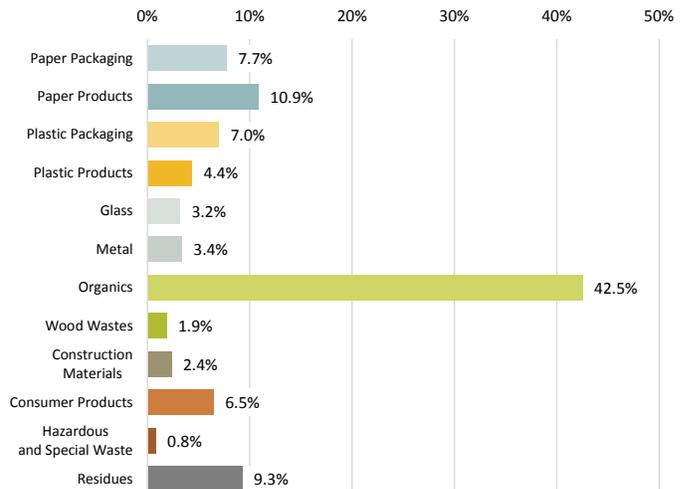


Figure 4: Self-hauled C&D Waste Sector

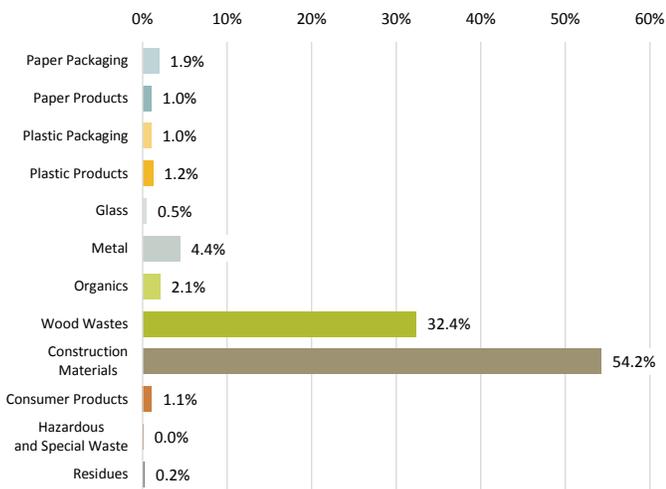
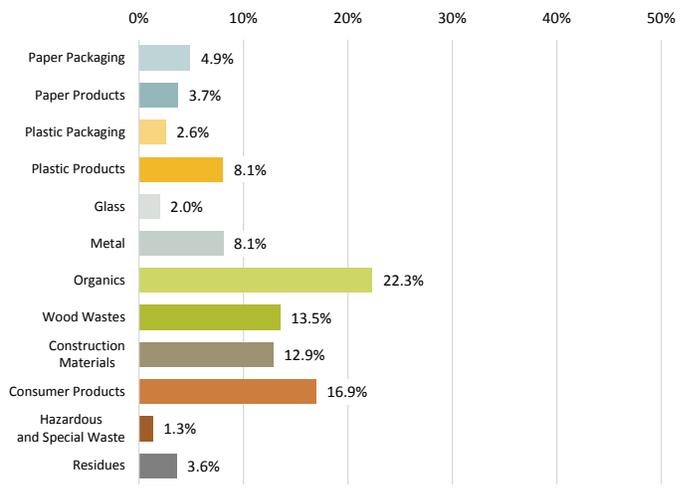


Figure 5: Self-hauled Other Waste Sector



2. Study Planning and Collection Approach

This section summarizes the planning and data collection approaches used in the 2015-2016 statewide study. The goal of this section is to provide context for understanding and interpreting the statewide characterization results presented in the following section. The methods used in this study essentially replicate the methods used in the 2009 study.

Ecology began this study by creating a plan that provided the framework for all subsequent data collection and analysis strategies. This planning stage included:

1. Selecting representative counties across the state to be visited;
2. Scheduling solid waste disposal facilities, statewide, for surveying and sampling;
3. Defining the waste sectors to be examined during the study; and
4. Creating the list of material types to be examined throughout the study.

Following the planning stage, Cascadia implemented the data collection and analysis strategies, which included:

1. Determining the composition of the waste stream through sampling and sorting; and
2. Quantifying the waste stream through vehicle surveys.

Each of these six steps is expanded upon below. To gain a more detailed understanding of the methodology used to carry out this study, please see Appendix A: Detailed Methodology.

Selecting Representative Counties

Before any discussions of data collection began, Ecology first selected ten counties in which to collect and sort waste samples. These ten counties represent Washington's six WGAs: Central, East, Northwest, Puget Sound, Southwest, and West. The six WGAs combine similar regions and take into account the geographic, demographic, and economic variation found throughout the state. A complete list of the counties in each WGA can be found in Appendix A: Detailed Methodology

In addition to the ten counties chosen as data collection sites, Ecology planned a supplementary analysis, combining the 2015-2016 statewide data with existing composition data from seven additional, recent, studies:

- 2015-2016 King County Waste Characterization Study (excludes Seattle)
- 2012 Clark County Waste Characterization Study
- 2014 Thurston County Waste Characterization Study
- 2011 Seattle Commercial and Self-haul Material Characterization Study
- 2015-2016 Seattle Residential Waste Characterization Study
- 2014 City of Tacoma Waste Characterization Study
- 2015-2016 Pierce County Waste Characterization Study (excludes Tacoma)

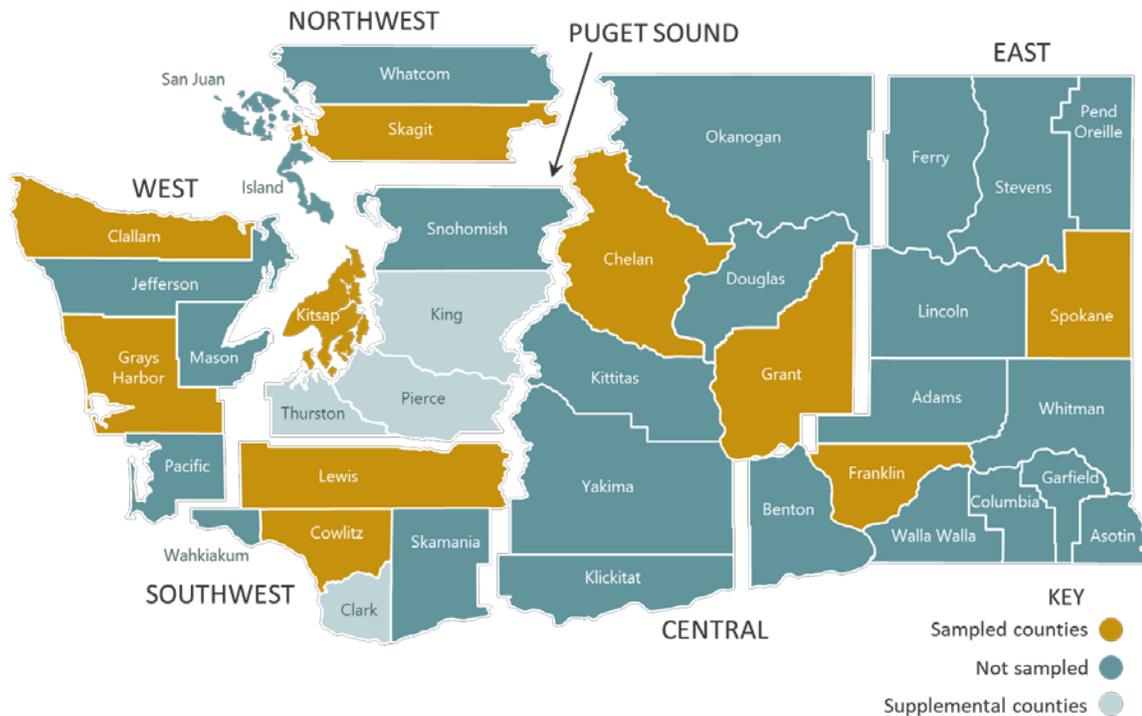
The ten counties visited and additional four counties analyzed are shown in Table 1 and Figure 6 below.

Composition results for the six Washington WGAs Results as well as the supplementary analysis can be found in Appendix D: Waste Generation Area Composition Results and Appendix E: Supplemental Composition Results.

Table 1: Waste Generation Areas and Counties Included in the 2015-2016 Statewide Study and Supplemental Analysis

WASTE GENERATION AREA	COUNTIES VISITED FOR STATEWIDE STUDY	SUPPLEMENTAL COUNTIES ANALYZED
Central	Grant, Chelan	
East	Spokane, Franklin	
Northwest	Skagit	
Puget Sound	Kitsap	King, Thurston, Pierce ¹
Southwest	Cowlitz, Lewis	Clark
West	Clallam, Grays Harbor	

Figure 6: Map of Waste Generation Areas



¹ The supplemental analysis also included waste composition data from the City of Seattle (King County) and City of Tacoma (Pierce County). These cities were not included in the countywide studies because those cities manage their waste separate from their respective counties.

Scheduling Surveying and Sampling Facilities

After selecting the ten counties to be visited, Ecology recruited one solid waste facility in each county where waste sampling, sorting, and surveying would occur. Table 2 lists the selected counties and corresponding facilities visited.

Table 2: Counties and Facilities Visited for Sampling and Surveying

COUNTY	FACILITY
Chelan	Wenatchee Landfill and Transfer Station ²
Clallam	Port Angeles Transfer Station
Cowlitz	Waste Control 3 rd Ave Transfer Station
Franklin	BDI Transfer Station
Grant	Ephrata Landfill
Grays Harbor	Aberdeen Central Transfer Station
Kitsap	Olympic View Transfer Station
Lewis	Lewis County Central Transfer Station
Skagit	Skagit County Recycling and Transfer Station
Spokane	Spokane Regional Waste to Energy Facility

In most cases, Cascadia conducted sampling and sorting at each facility one day per season over the course of four seasons (two “warm” and two “cold”). The dates the field crew sampled at each facility are detailed in Appendix A: Detailed Methodology. The BDI Transfer Station in Pasco was visited twice in Season 4 but not at all in Season 3 due to last minute site construction that prevented them from accommodating the sorting activities. The first season began in June 2015, and the sampling portion of the study ended with the May 2016 season. Seasons were defined as follows:

- Season 1: June 12-25, 2015
- Season 2: January 15-30, 2016
- Season 3: March 21-April 1, 2016
- Season 4: May 16-27, 2016

Cascadia carried out a vehicle survey to collect tonnage information (explained below) during the 2016 field seasons.

Defining Waste Sectors

Waste characterization data are often used for solid waste and recycling planning and targeting purposes. Planners need to have knowledge of the contents of waste from certain origins that follow the flow of society

² These are two separate facilities that are co-located and between the two they accept material from all four study waste sectors.

and will make sense for maximizing material recovery programs. Therefore, in such studies the overall waste stream is typically separated into multiple subgroups called sectors, designed to mimic the flow of the material into collection programs. Cascadia and Ecology divided Washington’s waste stream into the following four waste sectors:

- **Commercial**—defined as waste hauled by contracted or municipally operated vehicles in which 80 percent or more of the waste is from institutional, commercial, or industrial sources, and includes construction and demolition (C&D) materials.³
- **Residential**—defined as waste hauled by contracted or municipally operated vehicles in which 80 percent or more of the waste is from single-family and/or multifamily residential sources.
- **Self-hauled Construction and Demolition (C&D)**—defined as waste hauled by vehicles not operated by a franchise or municipality and whose waste was generated as a result of construction or demolition activities.
- **Self-hauled Other**—defined as waste hauled by vehicles not operated by a franchise or municipality and whose waste was not generated as a result of construction or demolition activities.

Table 3 shows how many samples the field crew collected from each of the four waste sectors. See Appendix A: Detailed Methodology for a detailed list of planned versus actual samples, by sector and WGA.

Table 3: Numbers of Waste Samples Characterized, by Sector

SECTOR	NUMBER OF SAMPLES
Commercial	243
Residential	122
Self-hauled C&D	120
Self-hauled Other	121
Total	606

Creating the List of Material Types

Cascadia characterized a total of 606 samples during the four seasons, separating the waste in each sample into one of 156 *material types*. Ecology created the list of 156 *material types* and organized them into 12 material classes. A thorough list of how the materials were aggregated into packaging and products can be found in Appendix B: List and Definitions of Material Types. Table 4 shows the number of *material types* in each of the broad material classes.

³ While this study was focused on municipal solid waste (MSW) and all facilities visited were MSW disposal facilities, many take C&D waste as accepted materials. Therefore, a commercial vehicle hauling C&D materials could have been randomly chosen for inclusion in the study.

Table 4: Number of Material Types per Material Class

MATERIAL CLASSES	NUMBER OF MATERIAL TYPES WITHIN CLASS
Paper Packaging	7
Paper Products	9
Plastic Packaging	17
Plastic Products	12
Glass	6
Metal	9
Organics	11
Wood Wastes	8
Construction Materials	13
Consumer Products	18
Hazardous Wastes	41
Residues	5
Total	156

PACKAGING AND PRODUCT LIST

Organizing materials into material classes (as in Table 4), are standard from a waste characterization perspective, but when considering waste reduction or product stewardship initiatives, planners may benefit from a more detailed breakdown of products versus packaging in the waste stream. Thus, for the purposes of a packaging and product analysis, the 156 *material types* were also aggregated into one of eight groupings as listed in Table 5 below. For example, all materials in both Paper and Plastic Packaging fall under Packaging for this analysis. The Glass class is split and all *glass containers* are moved under Packaging, while *plate glass* and *stoneware* move to Products. The remaining Glass material, *R/C glass*, is moved to Residues.

This aggregation allows planners to look at the 2015-2016 waste composition results and consider disposed waste with a fresh perspective. Instead of asking, “I wonder how to reduce the amount of merchandise bags, polystyrene clamshells, and aluminum foil in the waste stream?” planners can ask, “I wonder if there is a way to work with the packaging industry as a whole to reduce the amount of material being disposed?”

Table 5: The Eight Material Classes Used for the Packaging and Product Analysis

PACKAGING AND PRODUCT MATERIAL CLASSES	
Packaging	Wood Debris
Products	Construction Materials
Metal	Hazardous/Special Waste
Organics	Residues

A thorough list of how the materials were aggregated into packaging and products can be found in Appendix B: List and Definitions of Material Types.

Determining the Composition of the Statewide Waste Stream

Composition data from the statewide 2015-2016 study—the percentage of each material found in the waste stream—were determined by sorting the disposed waste samples into one of 156 *material types*. Samples of disposed waste from each of the sectors—commercial, residential, self-hauled C&D, and self-hauled other—were selected randomly at each facility and sorted by hand. Hand-sorting and weighing every *material type* found in a sample produces accurate measures that can be reliably converted to percentages and then applied to tonnage figures in order to quantify the waste stream.

Quantifying the Waste Stream

STATEWIDE DISPOSED TONS

The first step in quantifying Washington’s disposed waste stream was to determine the amount of MSW disposed statewide. Ecology provided an annual disposed tonnage figure of 4,589,537 tons.⁴

SECTOR ALLOCATIONS OF WASTE DISPOSED

Once the total statewide tonnage figure was known, tonnage figures for each of the four waste sectors were calculated. Cascadia carried out a vehicle survey during the 2016 seasons at the ten sampling facilities in order to determine how many tons of disposed waste were associated with each of the waste sectors. This process entailed collecting a load weight from each vehicle disposing waste at a given facility, and apportioning these tons to one of the four waste sectors. Compiling data from the three seasons of vehicle surveys yielded the “sector splits”, or percent of total waste disposed,

What does R/C stand for?

Most of the Material Classes created for this study include a *material type* that begins with “R/C” such as *R/C glass*, *R/C metals*, and *R/C organics*. These initials stand for “remainder/composite” and define a material that either cannot be categorized in any other material type or where the material is a composite of more than one material.

Examples of items included in some of the R/C material types are insulated wire and cigarette butts.

⁴ All estimated tons used in this report are based on 2014 disposed waste tonnage figures provided by annual disposal reports from permitted facilities: <http://www.ecy.wa.gov/programs/swfa/solidwastedata/>.

by weight, by each sector. Please see Appendix A: Detailed Methodology for a detailed account of the surveying and quantification process.

COMBINING THE TWO

Combining the overall annual disposed tonnage data with the sector allocations yielded tonnage figures for each sector. Table 6 shows the estimated disposed tonnages and ratio of those tonnages from each sector of the overall waste stream.

Table 6: Estimated Tons of Disposed Waste by Sector

SECTOR	EST. PERCENTAGE OF DISPOSED WASTE SECTOR	EST. TONS DISPOSED STATEWIDE
Commercial	43.7%	2,007,171
Residential	34.0%	1,561,810
Self-hauled C&D	12.8%	589,638
Self-hauled Other	9.4%	430,918
Totals	100.0%	4,589,537

The commercial sector disposed the largest amount of waste, composing nearly 44 percent of the state's waste stream—a projected 2.0 million tons. The residential sector represents approximately 34 percent (1.6 million tons) of total waste, and the two self-hauled sectors represent the final 22 percent (1.0 million tons). Please see the section entitled Estimating the Composition in Appendix A: Detailed Methodology for a detailed account of the characterization process.

Interpreting the Results

The next section presents statewide characterization results for Washington's overall disposed waste stream as well as for the commercial, residential, self-hauled C&D, and self-hauled other sectors.

Data are presented in four ways for each of these sectors:

1. A pair of bar charts presents an overview of waste composition by material class.
2. A third bar chart presents an overview of waste composition arranged into packaging, products, and other material groups. Refer to Appendix B: List and Definitions of Material Types, for a table illustrating how *material types* were grouped into packaging, products, and other material groups.
3. A table shows the 15 most prevalent *material types*, by weight.
4. A detailed table lists the full composition and quantity results for the 156 original *material types*. Refer to Appendix B: List and Definitions of Material Types for detailed descriptions and definitions of the *material types*.

MEANS AND ERROR RANGES

Cascadia statistically analyzed the data from the sorting process to provide two pieces of information for each of the *material types*:

- The estimated percent-by-weight composition of waste represented by the samples examined in this study.
- The error ranges (+/-) of our composition estimates.

All error ranges (+/-) were calculated at the 90 percent confidence level. The equations used in these calculations appear in Appendix A: Detailed Methodology.

The example below illustrates how the results can be interpreted. The best estimate of the amount of *compostable paper products* present in the universe of waste sampled is 4.0 percent (see Table 8). The figure 0.5 percent reflects the precision of the estimate. When calculations are performed at the 90 percent confidence level, we are 90 percent certain that the true mean for *compostable paper products* is between 4.0 percent plus 0.5 percent and 4.0 percent minus 0.5 percent. In other words, we are 90 percent certain that the true mean lies between 3.5 percent and 4.5 percent.

Packaging vs. Products?

Grouping material types under the headings of “packaging” or “products,” as done in the sector analysis below, gives planners another tool when targeting producers of waste and considering material recovery strategies.

Error Range (+/-)

An error range is used to measure the spread of values in a collection of data. For instance, if the quantities of *newspaper products* were found to be nearly the same in each of the 606 samples collected for this study, then this would result in a very narrow error range. By contrast, if some samples are 75% *newspaper products* and others are 0% *newspaper products*, there will be a much broader error range.

ROUNDING

When interpreting the results presented in the tables and figures in this report, it is important to consider the effect of rounding.

To keep the waste composition tables and figures readable, estimated tonnages are rounded to the nearest ton, and estimated percentages are rounded to the nearest tenth of a percent. Due to this rounding, the tonnages presented in the report, when added together, may not exactly match the subtotals and totals shown. Similarly, the percentages, when added together, may not exactly match the subtotals or totals shown. Also, percentages less than 0.05 percent are displayed as 0.0 percent.

3. Statewide Characterization Results

This section presents overall statewide composition results and the results by sector—commercial, residential, self-hauled C&D, and self-hauled other—for the 4.6 million tons of disposed MSW statewide.⁵

Overall Disposed Waste Stream

This section characterizes the overall disposed MSW stream for the entire state of Washington, combining samples from all four waste sectors and all six WGAs considered in this study. Composition and quantity data are generated from data collected from the ten counties visited during the 2015-2016 statewide study and presented using the material list of 156 *material types*.

OVERVIEW BY MATERIAL CLASS

Figure 7 illustrates composition estimates by material class for the overall statewide disposed waste stream. The largest material class in the overall waste stream is Organics, which accounts for approximately 29 percent of the waste stream by weight, followed by Wood Wastes (12%) and Construction Materials (12%). See Appendix B: List and Definitions of Material Types for a description of the *material types* included in each material class. Figure 8 illustrates the composition by material class, combining the packaging and product *material types*.

⁵ All estimated tons used in this report are based on 2014 disposed waste tonnage figures provided by annual disposal reports from permitted facilities: <http://www.ecy.wa.gov/programs/swfa/solidwastedata/>

Figure 7: Overall Statewide Disposed Waste Stream Composition by Material Class, 2015-2016

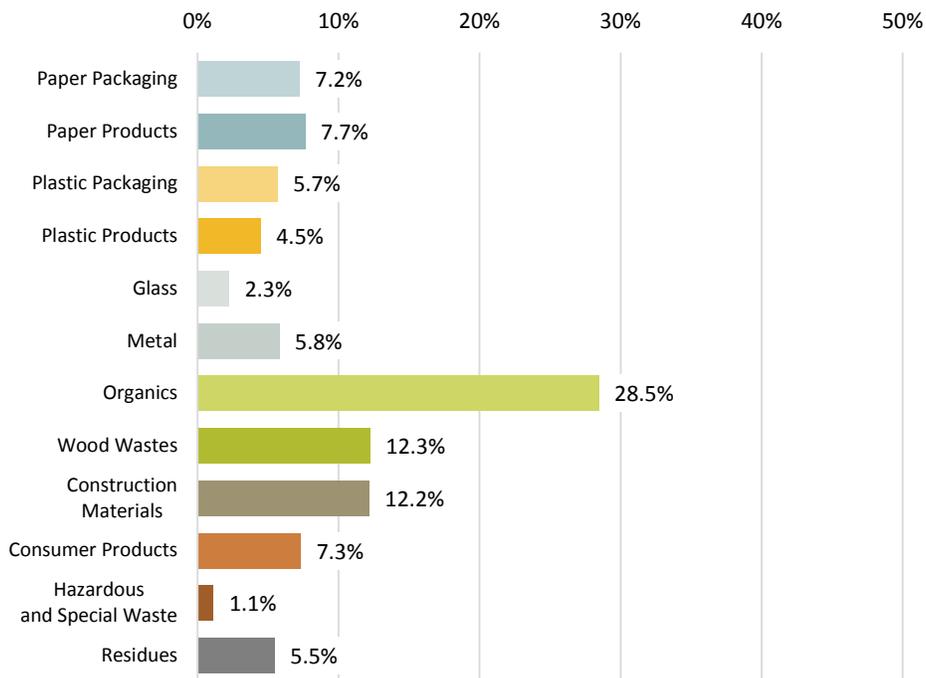
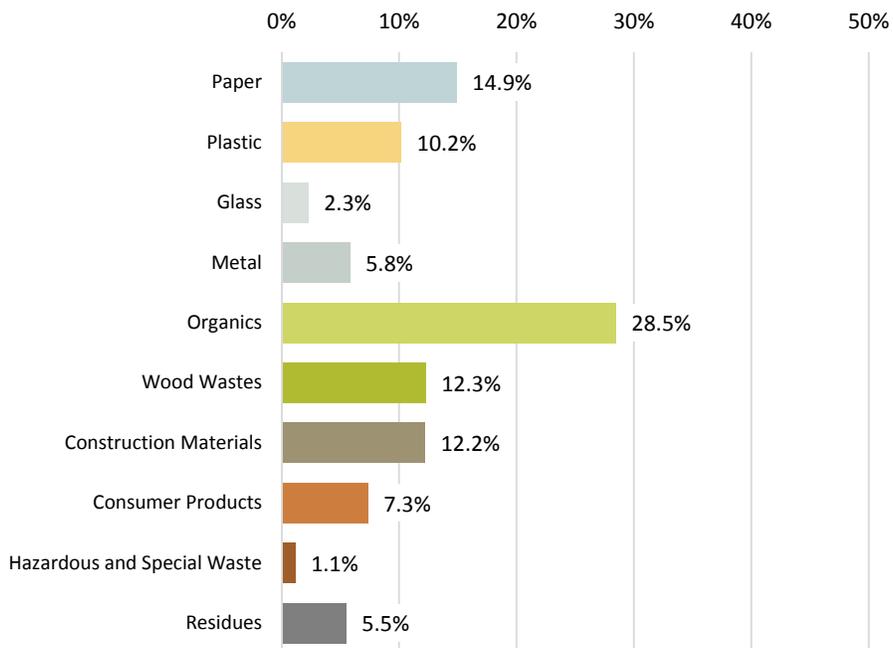


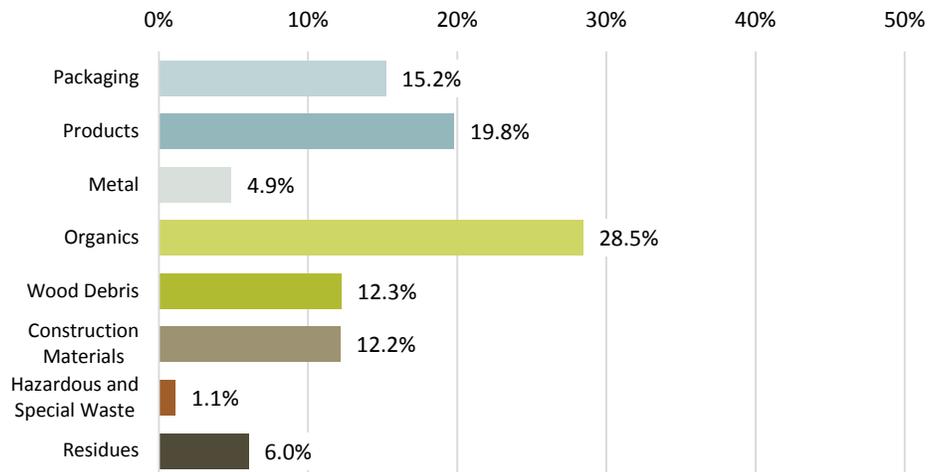
Figure 8: Overall Statewide Disposed Waste Stream Composition by Material Class, Combined Packaging and Products, 2015-2016



OVERVIEW OF PACKAGING AND PRODUCT MATERIAL GROUPS

As shown in Figure 9, products account for approximately one-fifth (20%) of the waste stream, and packaging materials make up approximately 15 percent of the overall disposed waste. See Appendix B: List and Definitions of Material Types for a description of the *material types* included in packaging, products, and the other groups shown.

**Figure 9: Overall Statewide Disposed Waste Stream
Packaging, Products, and Other Material Groups, 2015-2016**



FIFTEEN MOST PREVALENT MATERIALS

The fifteen most prevalent *material types* in the overall waste stream, as shown in Table 7, together account for over half (53%) of the waste stream. *Vegetative food* (both edible and inedible), and *leaves and grass* are the most prevalent *material types*. The three most prevalent (and four of the top five) are all compostable and together account for more than 20 percent of the waste stream by weight.

**Table 7: Overall Statewide Disposed Waste Stream
Fifteen Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Inedible Food - Vegetative	6.6%	6.6%	305,174
Edible Food - Vegetative	6.1%	12.7%	278,572
Yard & Garden Waste - Leaves & Grass	5.7%	18.4%	260,664
Disposable Diapers	4.6%	23.0%	209,214
Compostable Paper Products	4.0%	27.0%	184,006
Animal Manure	3.5%	30.4%	159,100
Cardboard/Kraft Paper Packaging	3.1%	33.6%	143,398
Asphalt Roofing	3.0%	36.6%	139,459
Painted Wood	2.7%	39.3%	122,526
Engineered Wood	2.6%	41.8%	118,266
R/C Metals	2.4%	44.2%	108,017
Other Ferrous Metal	2.3%	46.5%	106,823
Inedible Food - Meats, Fats, Oils	2.2%	48.7%	99,891
Edible Food - Meat, Fats, Oils	2.1%	50.8%	95,918
Dimensional Lumber	2.0%	52.8%	91,815
Total	52.8%		2,422,843

Subtotals and totals in tables and figures may not exactly match due to rounding

DETAILED COMPOSITION

Table 8 lists the composition percentages by weight for each *material type* in Washington's overall disposed waste stream. Total tons of disposed waste are based on 2014 figures from annual reports provided to Ecology by permitted disposal facilities.

Table 8: Overall Statewide Disposed Waste Stream, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	7.2%		332,543	Paper Products	7.7%		351,210
Newspaper Packaging	0.2%	0.1%	7,673	Newspaper	0.8%	0.2%	35,814
Cardboard/Kraft Paper Packaging	3.1%	0.5%	143,398	Cardboard/Kraft Paper Products	0.1%	0.0%	3,577
Other Groundwood Paper Packaging	0.1%	0.1%	5,267	Magazines	0.2%	0.1%	11,019
Mixed/Low Grade Paper Packaging	1.8%	0.2%	84,336	High-Grade Paper Products	0.7%	0.3%	31,828
Aseptic and Polycoat Packaging	0.2%	0.1%	10,552	Other Groundwood Paper Products	0.0%	0.0%	447
Compostable Paper Packaging	1.1%	0.3%	49,332	Mixed Low Grade Paper Products	1.1%	0.3%	50,689
R/C Paper Packaging	0.7%	0.1%	31,986	Compostable Paper Products	4.0%	0.5%	184,006
Plastic Packaging	5.7%		260,730	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.6%	0.1%	27,263	R/C Paper Products	0.7%	0.3%	33,829
#1 PETE Plastic Non-bottles	0.5%	0.1%	22,174	Plastic Products	4.5%		206,019
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	11,113	#1 PETE Plastic Products	0.0%	0.0%	780
#2 HDPE Plastic Colored Bottles	0.2%	0.0%	10,068	#2 HDPE Plastic Products	0.0%	0.0%	350
#2 HDPE Plastic Jars & Tubs	0.1%	0.0%	6,557	#3 PVC Plastic Products	0.0%	0.0%	136
#3 PVC Plastic Packaging	0.0%	0.0%	123	#4 LDPE Plastic Products	0.0%	0.0%	11
#4 LDPE Plastic Packaging	0.0%	0.0%	96	#5 PP Plastic Products	0.0%	0.0%	1,883
#5 PP Plastic Packaging	0.3%	0.1%	11,904	#6 PS Plastic Products	0.0%	0.0%	1,931
#6 PS Plastic Packaging	0.0%	0.0%	1,165	#7 Other Plastic Products	0.6%	0.2%	25,866
#7 Other Plastic Packaging	0.2%	0.0%	6,890	PLA/Compostable Plastic Products	0.0%	0.0%	251
Expanded Polystyrene Packaging	0.4%	0.1%	17,673	Plastic Garbage Bags	1.6%	0.2%	71,968
PLA/Compostable Plastic Packaging	0.0%	0.0%	597	Non-bag Plastic Film Products	0.1%	0.1%	6,055
Plastic Merchandise Bags	0.3%	0.0%	15,739	Bulky Rigid Plastic Products	1.1%	0.3%	50,277
Non-industrial Packaging Film Plastic	1.8%	0.2%	81,402	R/C Plastic Products	1.0%	0.3%	46,511
Industrial Packaging Film Plastic	0.9%	0.2%	39,249	Consumer Products	7.3%		336,483
Flexible Plastic Packaging	0.1%	0.0%	2,875	Televisions - CRT	0.1%	0.1%	3,422
R/C Plastic Packaging	0.1%	0.0%	5,843	Televisions - LCD	0.0%	0.0%	353
Metal	5.8%		266,781	Television Peripherals	0.1%	0.1%	3,596
Aluminum Beverage Cans	0.3%	0.0%	12,661	Computer Monitors - CRT	0.0%	0.0%	1,228
Aluminum Foil/Containers	0.1%	0.0%	5,431	Computer Monitors - LCD	0.0%	0.0%	122
Other Aluminum	0.1%	0.0%	4,079	Computers	0.0%	0.0%	880
Other Nonferrous	0.1%	0.1%	4,224	Computer Peripherals	0.0%	0.0%	1,019
Food Cans - Tinned	0.4%	0.1%	19,477	Computer Printers	0.1%	0.1%	3,711
Food Cans - Coated	0.0%	0.0%	1,438	Audio Equipment	0.2%	0.3%	9,131
White Goods	0.1%	0.1%	4,632	Electronic Gaming Equipment	0.0%	0.0%	55
Other Ferrous Metal	2.3%	0.9%	106,823	Other Consumer Electronics	0.2%	0.3%	10,706
R/C Metals	2.4%	0.8%	108,017	Textiles - Organic	2.0%	0.4%	91,615
Glass	2.3%		103,382	Textiles - Synthetic, Mixed, Unknown	1.7%	1.2%	75,742
Clear Glass Containers	0.8%	0.2%	34,594	Shoes, Purses, Belts	0.3%	0.1%	11,951
Green Glass Containers	0.2%	0.0%	9,204	Tires & Rubber	0.7%	0.3%	30,118
Brown Glass Containers	0.5%	0.2%	23,377	Furniture	1.3%	0.5%	59,842
Plate Glass	0.2%	0.2%	7,584	Mattresses	0.7%	0.3%	32,988
Stoneware/Kitchen Ceramics	0.1%	0.0%	3,706	R/C Consumer Products	0.0%	0.0%	4
R/C Glass	0.5%	0.2%	24,917	Hazardous and Special Waste	1.1%		52,470
Organics	28.5%		1,306,136	Pesticides	0.0%	0.0%	85
Edible Food - Vegetative	6.1%	1.0%	278,572	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	6.6%	0.9%	305,174	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.1%	0.4%	95,918	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.2%	0.4%	99,891	HID Lamps	0.0%	0.0%	578
Yard & Garden Waste - Leaves & Grass	5.7%	1.2%	260,664	Compact Fluorescent Lamps	0.0%	0.0%	55
Yard & Garden Waste - Prunings	1.0%	0.3%	47,490	Fluorescent Tubes	0.0%	0.0%	14
Animal Manure	3.5%	0.7%	159,100	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.1%	0.1%	3,817	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.1%	0.0%	2,580
Fruit Waste	0.4%	0.3%	16,539	Solvent-based Glues	0.0%	0.0%	1,145
R/C Organics	0.8%	0.3%	38,972	Water Based Glues	0.0%	0.0%	130
Wood Wastes	12.3%		562,462	Oil-based Paint	0.0%	0.0%	209
Treated Wood	0.9%	0.4%	40,103	Oil-based Clear Coatings	0.0%	0.0%	23
Painted Wood	2.7%	1.0%	122,526	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.0%	0.5%	91,815	Varnish	0.0%	0.0%	225
Engineered Wood	2.6%	1.4%	118,266	Urethane Coatings	0.0%	0.0%	173
Pallets & Crates	1.6%	0.7%	72,570	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.4%	0.1%	18,269	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.2%	0.2%	10,700	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.9%	1.2%	88,213	Primers/Sealers	0.0%	0.0%	29
Construction Materials	12.2%		559,594	Stains	0.0%	0.0%	0
Natural Wood	0.9%	1.2%	41,615	Water Repellants	0.1%	0.1%	2,458
Plastic Lumber	0.0%	0.0%	94	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	146
Insulation	0.4%	0.2%	17,197	Solvents	0.0%	0.0%	158
Asphalt Paving	0.1%	0.1%	5,327	Caustic Cleaners	0.0%	0.0%	640
Concrete	0.6%	0.3%	28,488	Dry-cell Batteries - Single Use	0.0%	0.0%	1,037
Drywall	1.5%	0.7%	68,751	Dry-cell Batteries - Rechargeable	0.0%	0.0%	107
Carpet	1.4%	0.9%	64,873	Wet-cell Batteries	0.0%	0.0%	89
Carpet Padding	1.0%	0.8%	43,981	Gasoline/Kerosene	0.0%	0.0%	83
Soil, Rocks, Sand	1.1%	0.5%	52,414	Motor Oil	0.0%	0.0%	572
Asphalt Roofing	3.0%	1.8%	139,459	Antifreeze	0.0%	0.0%	615
Plastic Flooring	0.2%	0.2%	8,700	Other Vehicle Fluids	0.0%	0.0%	23
Ceramics & Brick	0.7%	0.4%	33,616	Oil Filters	0.0%	0.0%	429
R/C Construction Materials	1.2%	0.6%	55,080	Explosives	0.0%	0.0%	0
Residues	5.5%		251,727	Medical Wastes	0.7%	0.5%	33,380
Disposable Diapers	4.6%	0.8%	209,214	Sharps	0.0%	0.0%	27
Ash	0.4%	0.2%	16,147	Pharmaceuticals/Vitamins	0.0%	0.0%	680
Dust	0.0%	0.0%	1,247	Other Cleaners/Chemicals	0.0%	0.0%	504
Fines	0.4%	0.2%	17,128	Personal Care Products	0.1%	0.1%	5,212
Sludge/Special Industrial	0.2%	0.2%	7,991	Other Potentially Hazardous Waste	0.0%	0.0%	1,066
Sample Count	606			Totals	100%		4,589,537

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

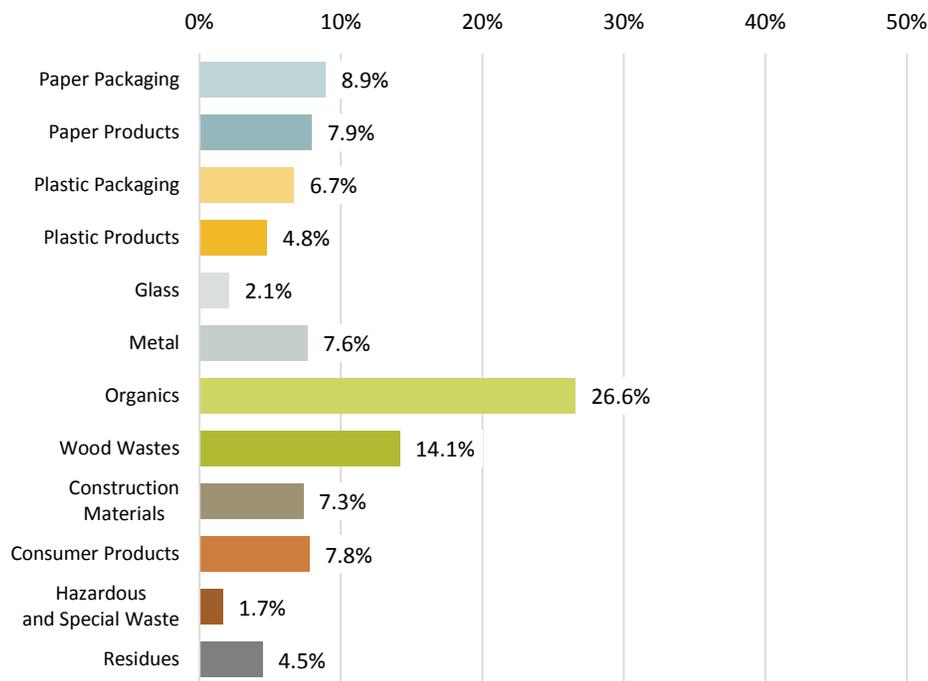
Commercial Waste

This section characterizes disposed MSW from the commercial sector for the entire State of Washington, combining commercial samples from all six WGAs considered in this study. Composition and quantity data are generated from data collected from the ten counties visited during the 2015-2016 statewide study and are presented using the material list of 156 *material types*.

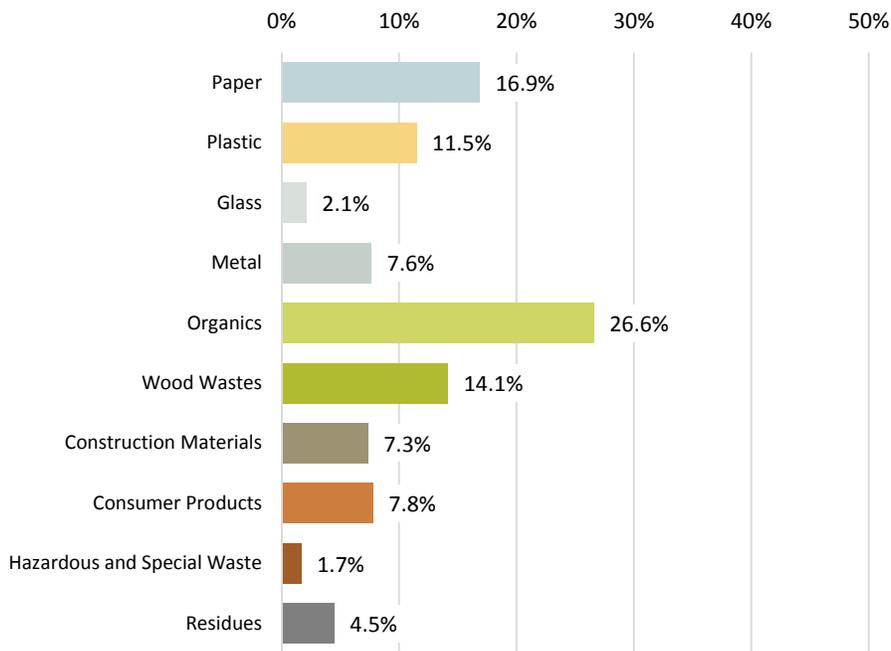
OVERVIEW BY MATERIAL CLASS

Composition estimates by material class for the statewide commercial disposed waste sector are illustrated in Figure 10. The largest material class in this waste sector is Organics, which accounts for approximately one-quarter (27%) of the waste sector by weight, followed by Wood Wastes (14%) and Paper Packaging (9%). See Appendix B: List and Definitions of Material Types for a description of the *material types* included in each material class. Figure 11 illustrates the composition by material class, combining the packaging and product *material types*.

**Figure 10: Commercial Disposed Waste Sector
Composition by Material Class, 2015-2016**



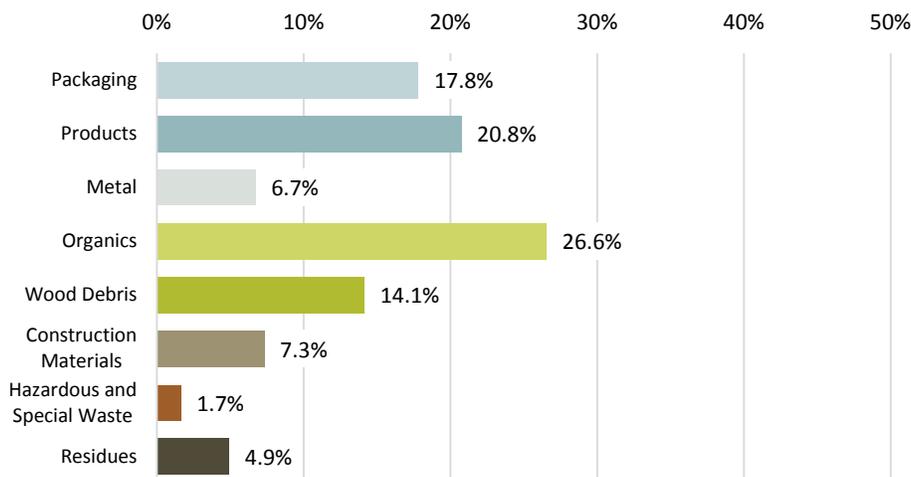
**Figure 11: Commercial Disposed Waste Sector
Composition by Material Class, Combined Packaging and Products, 2015-2016**



OVERVIEW OF PACKAGING AND PRODUCT MATERIAL GROUPS

As shown in Figure 12, products account for approximately 21 percent of the commercial waste sector, and packaging materials for approximately 18 percent of commercial disposed waste. See Appendix B: List and Definitions of Material Types for a description of the *material types* included in packaging, products, and the other groups shown.

**Figure 12: Commercial Disposed Waste Sector
Packaging, Products, and Other Material Groups, 2015-2016**



FIFTEEN MOST PREVALENT MATERIALS

The fifteen most prevalent *material types* in the commercial waste sector, as shown in Table 9, combined account for over half (54%) of the waste sector. As with the overall waste stream, *vegetative food* (both edible and inedible), *compostable paper products*, and *cardboard/Kraft paper packaging* are the most prevalent *material types*, are typically compostable or recyclable, and together account for nearly one quarter (22%) of the waste sector by weight.

**Table 9: Commercial Disposed Waste Sector
Fifteen Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Edible Food - Vegetative	7.1%	7.1%	142,697
Inedible Food - Vegetative	6.6%	13.7%	131,675
Compostable Paper Products	4.3%	18.0%	85,959
Cardboard/Kraft Paper Packaging	4.0%	21.9%	79,420
Other Ferrous Metal	3.6%	25.6%	73,118
Engineered Wood	3.4%	29.0%	68,778
Yard & Garden Waste - Leaves & Grass	3.3%	32.3%	67,214
Disposable Diapers	3.0%	35.3%	59,739
Pallets & Crates	3.0%	38.3%	59,712
R/C Metals	2.9%	41.2%	58,151
Textiles - Synthetic, Mixed, Unknown	2.6%	43.8%	52,614
Inedible Food - Meats, Fats, Oils	2.5%	46.3%	50,797
Animal Manure	2.5%	48.8%	49,695
Edible Food - Meat, Fats, Oils	2.4%	51.2%	49,049
Dimensional Lumber	2.4%	53.7%	48,955
Total	53.7%		1,077,572

Subtotals and totals in tables and figures may not exactly match due to rounding

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington's commercial disposed waste sector are listed in Table 10.

Table 10: Commercial Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	8.9%		179,039	Paper Products	7.9%		159,240
Newspaper Packaging	0.3%	0.2%	5,658	Newspaper	0.5%	0.2%	9,457
Cardboard/Kraft Paper Packaging	4.0%	0.8%	79,420	Cardboard/Kraft Paper Products	0.1%	0.0%	1,545
Other Groundwood Paper Packaging	0.1%	0.1%	2,643	Magazines	0.1%	0.1%	2,501
Mixed/Low Grade Paper Packaging	1.7%	0.3%	34,085	High-Grade Paper Products	0.6%	0.4%	12,199
Aseptic and Polycoat Packaging	0.4%	0.3%	7,380	Other Groundwood Paper Products	0.0%	0.0%	227
Compostable Paper Packaging	1.5%	0.8%	30,758	Mixed Low Grade Paper Products	1.3%	0.5%	25,478
R/C Paper Packaging	1.0%	0.3%	19,094	Compostable Paper Products	4.3%	0.9%	85,959
Plastic Packaging	6.7%		134,377	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.5%	0.1%	10,727	R/C Paper Products	1.1%	0.5%	21,874
#1 PETE Plastic Non-bottles	0.4%	0.1%	8,654	Plastic Products	4.8%		95,864
#2 HDPE Plastic Natural Bottles	0.3%	0.1%	6,249	#1 PETE Plastic Products	0.0%	0.0%	628
#2 HDPE Plastic Colored Bottles	0.2%	0.0%	3,256	#2 HDPE Plastic Products	0.0%	0.0%	90
#2 HDPE Plastic Jars & Tubs	0.2%	0.1%	3,187	#3 PVC Plastic Products	0.0%	0.0%	103
#3 PVC Plastic Packaging	0.0%	0.0%	41	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	48	#5 PP Plastic Products	0.1%	0.1%	1,546
#5 PP Plastic Packaging	0.3%	0.1%	5,352	#6 PS Plastic Products	0.0%	0.0%	713
#6 PS Plastic Packaging	0.0%	0.0%	238	#7 Other Plastic Products	0.4%	0.1%	8,040
#7 Other Plastic Packaging	0.1%	0.0%	2,392	PLA/Compostable Plastic Products	0.0%	0.0%	191
Expanded Polystyrene Packaging	0.4%	0.2%	7,069	Plastic Garbage Bags	2.1%	0.3%	41,163
PLA/Compostable Plastic Packaging	0.0%	0.0%	202	Non-bag Plastic Film Products	0.2%	0.1%	3,114
Plastic Merchandise Bags	0.2%	0.1%	4,873	Bulky Rigid Plastic Products	0.7%	0.3%	13,473
Non-industrial Packaging Film Plastic	2.1%	0.5%	42,157	R/C Plastic Products	1.3%	0.7%	26,803
Industrial Packaging Film Plastic	1.7%	0.5%	34,220	Consumer Products	7.8%		155,864
Flexible Plastic Packaging	0.1%	0.0%	1,487	Televisions - CRT	0.1%	0.1%	1,802
R/C Plastic Packaging	0.2%	0.1%	4,223	Televisions - LCD	0.0%	0.0%	0
Metal	7.6%		153,159	Television Peripherals	0.1%	0.2%	2,659
Aluminum Beverage Cans	0.2%	0.1%	4,457	Computer Monitors - CRT	0.0%	0.1%	837
Aluminum Foil/Containers	0.1%	0.0%	1,954	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	2,381	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.1%	1,635	Computer Peripherals	0.0%	0.0%	43
Food Cans - Tinned	0.4%	0.1%	8,209	Computer Printers	0.1%	0.1%	2,419
Food Cans - Coated	0.0%	0.0%	620	Audio Equipment	0.4%	0.7%	8,247
White Goods	0.1%	0.2%	2,634	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	3.6%	2.0%	73,118	Other Consumer Electronics	0.1%	0.1%	1,182
R/C Metals	2.9%	1.6%	58,151	Textiles - Organic	1.3%	0.4%	25,145
Glass	2.1%		42,052	Textiles - Synthetic, Mixed, Unknown	2.6%	2.8%	52,614
Clear Glass Containers	0.6%	0.3%	11,799	Shoes, Purses, Belts	0.2%	0.2%	4,458
Green Glass Containers	0.2%	0.1%	3,273	Tires & Rubber	0.9%	0.5%	18,740
Brown Glass Containers	0.7%	0.4%	14,278	Furniture	1.5%	1.1%	30,345
Plate Glass	0.1%	0.1%	1,939	Mattresses	0.4%	0.3%	7,373
Stoneware/Kitchen Ceramics	0.1%	0.0%	1,192	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.5%	0.2%	9,571	Hazardous and Special Waste	1.7%		33,288
Organics	26.6%		533,363	Pesticides	0.0%	0.0%	59
Edible Food - Vegetative	7.1%	2.0%	142,697	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	6.6%	1.6%	131,675	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.4%	0.6%	49,049	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.5%	0.8%	50,797	HID Lamps	0.0%	0.0%	503
Yard & Garden Waste - Leaves & Grass	3.3%	1.6%	67,214	Compact Fluorescent Lamps	0.0%	0.0%	7
Yard & Garden Waste - Prunings	0.3%	0.2%	6,389	Fluorescent Tubes	0.0%	0.0%	7
Animal Manure	2.5%	1.4%	49,695	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	69	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	465
Fruit Waste	0.8%	0.8%	16,539	Solvent-based Glues	0.1%	0.1%	1,069
R/C Organics	1.0%	0.4%	19,240	Water Based Glues	0.0%	0.0%	0
Wood Wastes	14.1%		284,004	Oil-based Paint	0.0%	0.0%	5
Treated Wood	0.7%	0.5%	14,199	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	2.3%	1.6%	47,094	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.4%	0.9%	48,955	Varnish	0.0%	0.0%	0
Engineered Wood	3.4%	2.7%	68,778	Urethane Coatings	0.0%	0.0%	173
Pallets & Crates	3.0%	1.7%	59,712	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.2%	0.1%	3,873	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.2%	0.2%	4,563	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.8%	1.2%	36,830	Primers/Sealers	0.0%	0.0%	12
Construction Materials	7.3%		147,309	Stains	0.0%	0.0%	0
Natural Wood	0.1%	0.1%	1,104	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	94	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	27
Insulation	0.6%	0.4%	11,559	Solvents	0.0%	0.0%	3
Asphalt Paving	0.0%	0.0%	325	Caustic Cleaners	0.0%	0.0%	91
Concrete	0.7%	0.6%	14,761	Dry-cell Batteries - Single Use	0.0%	0.0%	162
Drywall	0.8%	0.5%	16,816	Dry-cell Batteries - Rechargeable	0.0%	0.0%	85
Carpet	0.1%	0.1%	2,997	Wet-cell Batteries	0.0%	0.0%	58
Carpet Padding	0.2%	0.2%	3,353	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.6%	1.1%	32,727	Motor Oil	0.0%	0.0%	69
Asphalt Roofing	0.6%	0.4%	11,842	Antifreeze	0.0%	0.0%	35
Plastic Flooring	0.2%	0.3%	3,702	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.9%	0.7%	17,624	Oil Filters	0.0%	0.0%	124
R/C Construction Materials	1.5%	1.3%	30,406	Explosives	0.0%	0.0%	0
Residues	4.5%		89,613	Medical Wastes	1.5%	1.1%	29,851
Disposable Diapers	3.0%	1.1%	59,739	Sharps	0.0%	0.0%	5
Ash	0.4%	0.4%	7,930	Pharmaceuticals/Vitamins	0.0%	0.0%	55
Dust	0.0%	0.0%	332	Other Cleaners/Chemicals	0.0%	0.0%	27
Fines	0.7%	0.4%	13,620	Personal Care Products	0.0%	0.0%	137
Sludge/Special Industrial	0.4%	0.4%	7,991	Other Potentially Hazardous Waste	0.0%	0.0%	258
Sample Count	243			Totals	100%		2,007,171

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

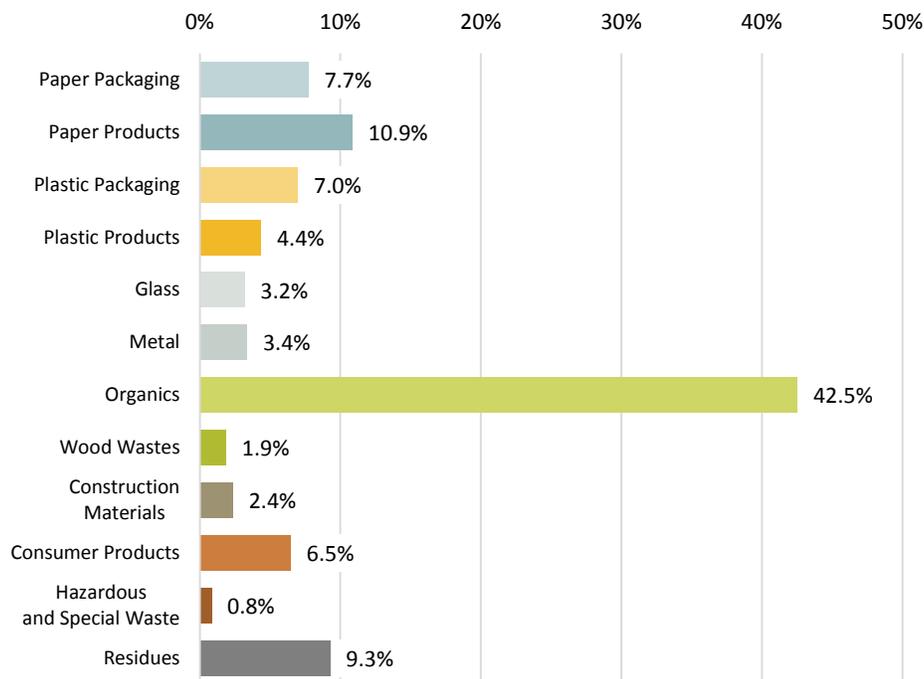
Residential Waste

This section characterizes disposed *MSW* from the residential sector for the entire State of Washington, combining residential samples from all six WGAs considered in this study. Composition and quantity data are generated from data collected from the ten counties visited during the 2015-2016 statewide study and use the material list of 156 *material types*.

OVERVIEW BY MATERIAL CLASS

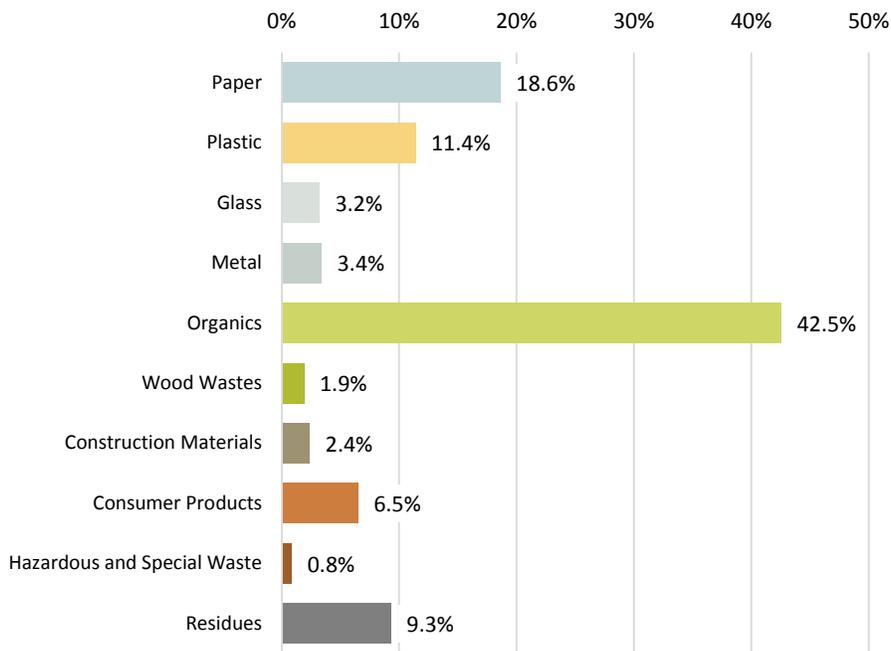
Composition estimates by material class for the statewide residential disposed waste sector are illustrated in Figure 13. The largest material class in this waste sector is Organics, which accounts for approximately 43 percent of the waste sector by weight, followed by Paper Products (11%) and Residues (10%). The majority of Residues is *disposable diapers* (9%). See Appendix B: List and Definitions of Material Types for a description of the *material types* included in each material class. Figure 14 illustrates the composition by material class, combining the packaging and product *material types*.

**Figure 13: Residential Disposed Waste Sector
Composition by Material Class, 2015-2016**





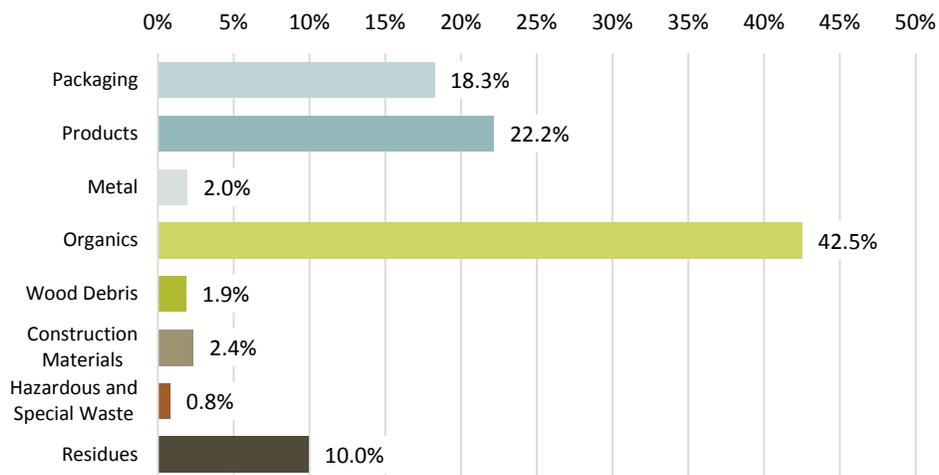
**Figure 14: Residential Disposed Waste Sector
Composition by Material Class, Combined Packaging and Products, 2015-2016**



OVERVIEW OF PACKAGING AND PRODUCT MATERIAL GROUPS

As shown in Figure 15, products account for approximately 22 percent of the residential disposed waste sector and packaging materials make up approximately 18 percent. See Appendix B: List and Definitions of Material Types for a description of the *material types* included in packaging, products, and the other groups shown.

**Figure 15: Residential Disposed Waste Sector
Packaging, Products, and Other Material Groups, 2015-2016**



FIFTEEN MOST PREVALENT MATERIALS

Inedible food-vegetative and *leaves and grass* are the most prevalent *material types*, comprising 11 percent and 10 percent, respectively, of residential disposed waste. Approximately 70 percent of residential waste is composed of the 15 *material types* shown in Table 11. *Cardboard/Kraft paper packaging* is the most prevalent traditionally recyclable *material type*, comprising approximately 3 percent of residential disposed waste.

**Table 11: Residential Disposed Waste Sector
Fifteen Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Inedible Food - Vegetative	10.6%	10.6%	165,171
Yard & Garden Waste - Leaves & Grass	10.0%	20.6%	156,084
Disposable Diapers	8.6%	29.2%	134,933
Edible Food - Vegetative	7.7%	36.9%	119,590
Animal Manure	6.2%	43.1%	97,015
Compostable Paper Products	5.7%	48.8%	89,107
Textiles - Organic	3.5%	52.3%	54,433
Cardboard/Kraft Paper Packaging	2.8%	55.1%	44,199
Inedible Food - Meats, Fats, Oils	2.8%	57.9%	44,084
Mixed/Low Grade Paper Packaging	2.8%	60.7%	43,068
Edible Food - Meat, Fats, Oils	2.6%	63.3%	40,333
Non-industrial Packaging Film Plastic	2.2%	65.4%	34,146
Plastic Garbage Bags	1.7%	67.1%	26,075
Newspaper	1.6%	68.7%	24,579
Yard & Garden Waste - Prunings	1.6%	70.3%	24,368
Total	70.3%		1,097,183

Subtotals and totals in tables and figures may not exactly match due to rounding

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington's residential disposed waste sector are presented in Table 12.

Table 12: Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	7.7%		120,993	Paper Products	10.9%		169,839
Newspaper Packaging	0.1%	0.1%	1,887	Newspaper	1.6%	0.6%	24,579
Cardboard/Kraft Paper Packaging	2.8%	0.8%	44,199	Cardboard/Kraft Paper Products	0.1%	0.1%	2,021
Other Groundwood Paper Packaging	0.2%	0.0%	2,467	Magazines	0.5%	0.1%	7,969
Mixed/Low Grade Paper Packaging	2.8%	0.4%	43,068	High-Grade Paper Products	1.1%	0.6%	17,799
Aseptic and Polycoat Packaging	0.2%	0.0%	2,600	Other Groundwood Paper Products	0.0%	0.0%	115
Compostable Paper Packaging	1.1%	0.2%	16,738	Mixed Low Grade Paper Products	1.3%	0.4%	20,892
R/C Paper Packaging	0.6%	0.2%	10,035	Compostable Paper Products	5.7%	0.7%	89,107
Plastic Packaging	7.0%		109,391	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	1.0%	0.4%	15,607	R/C Paper Products	0.5%	0.3%	7,358
#1 PETE Plastic Non-bottles	0.8%	0.2%	12,424	Plastic Products	4.4%		68,334
#2 HDPE Plastic Natural Bottles	0.3%	0.1%	4,479	#1 PETE Plastic Products	0.0%	0.0%	127
#2 HDPE Plastic Colored Bottles	0.4%	0.1%	6,092	#2 HDPE Plastic Products	0.0%	0.0%	201
#2 HDPE Plastic Jars & Tubs	0.1%	0.0%	2,264	#3 PVC Plastic Products	0.0%	0.0%	14
#3 PVC Plastic Packaging	0.0%	0.0%	79	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	46	#5 PP Plastic Products	0.0%	0.0%	289
#5 PP Plastic Packaging	0.4%	0.1%	6,051	#6 PS Plastic Products	0.1%	0.0%	1,142
#6 PS Plastic Packaging	0.1%	0.0%	923	#7 Other Plastic Products	0.8%	0.4%	12,263
#7 Other Plastic Packaging	0.3%	0.1%	4,075	PLA/Compostable Plastic Products	0.0%	0.0%	28
Expanded Polystyrene Packaging	0.6%	0.1%	9,194	Plastic Garbage Bags	1.7%	0.2%	26,075
PLA/Compostable Plastic Packaging	0.0%	0.0%	305	Non-bag Plastic Film Products	0.1%	0.1%	1,245
Plastic Merchandise Bags	0.6%	0.1%	9,657	Bulky Rigid Plastic Products	1.1%	0.6%	16,703
Non-industrial Packaging Film Plastic	2.2%	0.3%	34,146	R/C Plastic Products	0.7%	0.2%	10,247
Industrial Packaging Film Plastic	0.1%	0.1%	1,701	Consumer Products	6.5%		101,264
Flexible Plastic Packaging	0.1%	0.0%	1,320	Televisions - CRT	0.0%	0.1%	705
R/C Plastic Packaging	0.1%	0.0%	1,027	Televisions - LCD	0.0%	0.0%	353
Metal	3.4%		52,826	Television Peripherals	0.0%	0.0%	457
Aluminum Beverage Cans	0.5%	0.1%	7,532	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.2%	0.0%	3,317	Computer Monitors - LCD	0.0%	0.0%	122
Other Aluminum	0.1%	0.1%	932	Computers	0.1%	0.1%	815
Other Nonferrous	0.0%	0.0%	197	Computer Peripherals	0.0%	0.0%	15
Food Cans - Tinned	0.6%	0.1%	9,958	Computer Printers	0.1%	0.1%	1,143
Food Cans - Coated	0.0%	0.0%	751	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.1%	668	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.8%	0.3%	11,801	Other Consumer Electronics	0.6%	0.7%	9,140
R/C Metals	1.1%	0.4%	17,671	Textiles - Organic	3.5%	1.0%	54,433
Glass	3.2%		50,087	Textiles - Synthetic, Mixed, Unknown	1.1%	0.4%	16,476
Clear Glass Containers	1.3%	0.3%	20,248	Shoes, Purses, Belts	0.4%	0.2%	6,787
Green Glass Containers	0.3%	0.1%	4,976	Tires & Rubber	0.4%	0.3%	6,353
Brown Glass Containers	0.5%	0.1%	7,933	Furniture	0.2%	0.2%	2,472
Plate Glass	0.3%	0.5%	5,350	Mattresses	0.1%	0.1%	1,992
Stoneware/Kitchen Ceramics	0.1%	0.0%	1,176	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.7%	0.3%	10,405	Hazardous and Special Waste	0.8%		13,120
Organics	42.5%		664,379	Pesticides	0.0%	0.0%	25
Edible Food - Vegetative	7.7%	1.0%	119,590	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	10.6%	1.5%	165,171	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.6%	0.7%	40,333	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.8%	0.6%	44,084	HID Lamps	0.0%	0.0%	74
Yard & Garden Waste - Leaves & Grass	10.0%	2.3%	156,084	Compact Fluorescent Lamps	0.0%	0.0%	36
Yard & Garden Waste - Prunings	1.6%	0.7%	24,368	Fluorescent Tubes	0.0%	0.0%	2
Animal Manure	6.2%	1.2%	97,015	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	400	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.1%	0.1%	1,972
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	1.1%	0.5%	17,335	Water Based Glues	0.0%	0.0%	122
Wood Wastes	1.9%		29,399	Oil-based Paint	0.0%	0.0%	10
Treated Wood	0.3%	0.4%	4,566	Oil-based Clear Coatings	0.0%	0.0%	4
Painted Wood	0.5%	0.4%	7,353	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.3%	0.2%	4,145	Varnish	0.0%	0.0%	225
Engineered Wood	0.4%	0.2%	5,874	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.2%	0.2%	3,579	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.1%	0.0%	1,109	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.2%	0.1%	2,774	Primers/Sealers	0.0%	0.0%	18
Construction Materials	2.4%		36,991	Stains	0.0%	0.0%	0
Natural Wood	0.2%	0.3%	2,570	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.0%	0.0%	176	Solvents	0.0%	0.0%	156
Asphalt Paving	0.0%	0.0%	121	Caustic Cleaners	0.0%	0.0%	67
Concrete	0.4%	0.5%	6,195	Dry-cell Batteries - Single Use	0.1%	0.0%	833
Drywall	0.2%	0.1%	3,037	Dry-cell Batteries - Rechargeable	0.0%	0.0%	14
Carpet	0.4%	0.3%	6,984	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.3%	0.3%	4,526	Gasoline/Kerosene	0.0%	0.0%	83
Soil, Rocks, Sand	0.5%	0.5%	8,413	Motor Oil	0.0%	0.0%	65
Asphalt Roofing	0.0%	0.0%	43	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	201	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.1%	0.1%	2,325	Oil Filters	0.0%	0.0%	80
R/C Construction Materials	0.2%	0.2%	2,400	Explosives	0.0%	0.0%	0
Residues	9.3%		145,185	Medical Wastes	0.2%	0.3%	3,525
Disposable Diapers	8.6%	1.5%	134,933	Sharps	0.0%	0.0%	22
Ash	0.4%	0.4%	6,715	Pharmaceuticals/Vitamins	0.0%	0.0%	373
Dust	0.1%	0.1%	873	Other Cleaners/Chemicals	0.0%	0.0%	200
Fines	0.2%	0.1%	2,663	Personal Care Products	0.3%	0.4%	4,481
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	733
Sample Count	122			Totals	100%		1,561,810

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

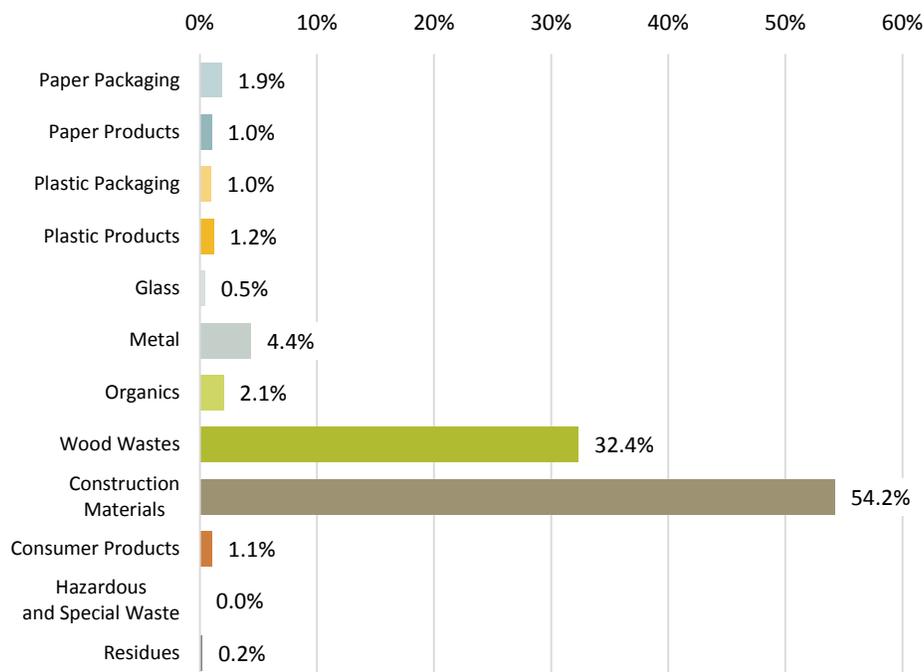
Self-hauled C&D Waste

This section characterizes disposed MSW from the self-hauled C&D sector for the entire State of Washington, combining self-hauled C&D samples from all six WGAs considered in this study. Composition and quantity data are generated from data collected from the ten counties visited during the 2015-2016 statewide study and use the material list of 156 *material types*.

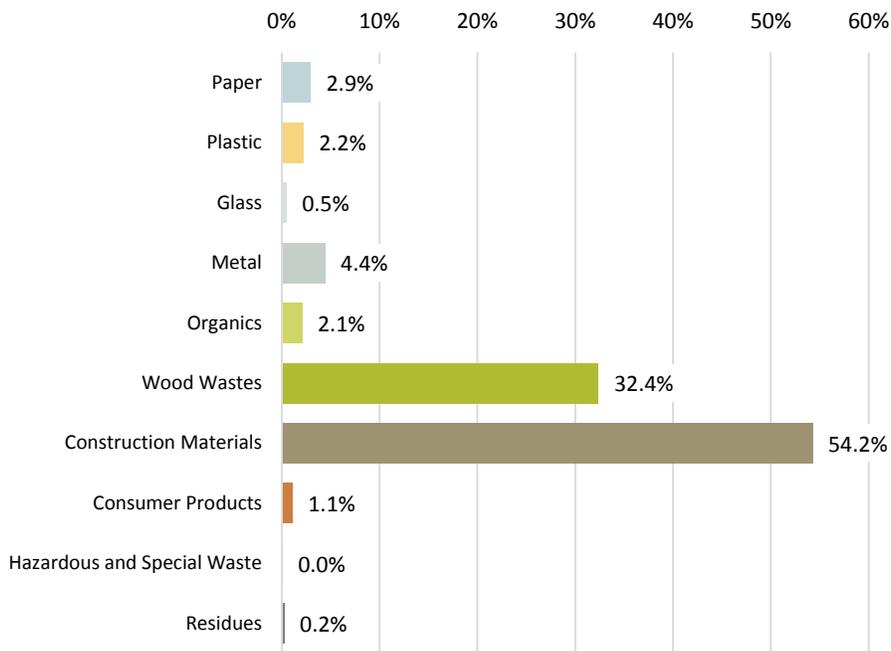
OVERVIEW BY MATERIAL CLASS

Composition estimates by material class for the statewide self-hauled C&D disposed waste sector are illustrated in Figure 16. The largest material class in this waste sector is Construction Materials, which accounts for over half (54%) of the waste sector by weight, followed by Wood Wastes (32%). The ten remaining material classes combined comprise approximately 13 percent of the self-hauled C&D disposed waste sector. See Appendix B: List and Definitions of Material Types for a description of the *material types* included in each material class. Figure 17 illustrates the composition by material class, combining the packaging and product *material types*.

**Figure 16: Self-hauled C&D Disposed Waste Sector
Composition by Material Class, 2015-2016**



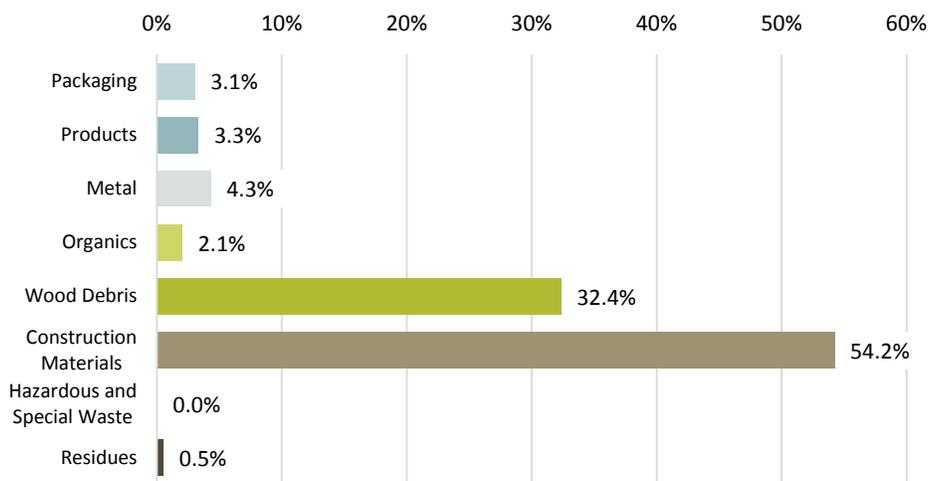
**Figure 17: Self-hauled C&D Disposed Waste Sector
Composition by Material Class, Combined Packaging and Products, 2015-2016**



OVERVIEW OF PACKAGING AND PRODUCT MATERIAL GROUPS

As shown in Figure 18, packaging materials and products combined comprise approximately six percent of this waste sector. See Appendix B: List and Definitions of Material Types for a description of the *material types* included in packaging, products, and the other groups shown.

**Figure 18: Self-hauled C&D Disposed Waste Sector
Packaging, Products, and Other Material Groups, 2015-2016**



FIFTEEN MOST PREVALENT MATERIALS

When combined, the fifteen most prevalent *material types* in the self-hauled C&D disposed waste sector account for approximately 87 percent of this waste sector, as shown in Table 13. *Asphalt roofing* comprises over one-fifth (21.5%) of the self-hauled C&D disposed waste sector.

**Table 13: Self-hauled C&D Disposed Waste Sector
Fifteen Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Asphalt Roofing	21.5%	21.5%	126,864
Painted Wood	7.9%	29.4%	46,398
Drywall	7.3%	36.7%	43,238
R/C Wood Wastes	7.3%	44.0%	42,751
Carpet	6.3%	50.3%	37,103
Engineered Wood	6.0%	56.3%	35,671
Carpet Padding	5.8%	62.2%	34,476
Natural Wood	5.8%	67.9%	34,029
Dimensional Lumber	4.9%	72.8%	28,964
R/C Construction Materials	3.4%	76.2%	20,052
Treated Wood	3.2%	79.5%	19,068
R/C Metals	2.5%	82.0%	14,689
Other Ferrous Metal	1.7%	83.7%	10,275
Pallets & Crates	1.6%	85.3%	9,635
Cardboard/Kraft Paper Packaging	1.5%	86.8%	8,585
Total	86.8%		511,797

Subtotals and totals in tables and figures may not exactly match due to rounding

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington's self-hauled C&D disposed waste sector are listed in Table 14.

Table 14: Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	1.9%		11,303	Paper Products	1.0%		6,020
Newspaper Packaging	0.0%	0.0%	107	Newspaper	0.0%	0.0%	95
Cardboard/Kraft Paper Packaging	1.5%	0.6%	8,585	Cardboard/Kraft Paper Products	0.0%	0.0%	11
Other Groundwood Paper Packaging	0.0%	0.0%	9	Magazines	0.0%	0.0%	196
Mixed/Low Grade Paper Packaging	0.2%	0.1%	1,113	High-Grade Paper Products	0.1%	0.1%	510
Aseptic and Polycoat Packaging	0.0%	0.0%	16	Other Groundwood Paper Products	0.0%	0.0%	57
Compostable Paper Packaging	0.0%	0.0%	41	Mixed Low Grade Paper Products	0.1%	0.1%	704
R/C Paper Packaging	0.2%	0.2%	1,432	Compostable Paper Products	0.1%	0.2%	866
Plastic Packaging	1.0%		5,829	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.0%	0.0%	170	R/C Paper Products	0.6%	0.8%	3,581
#1 PETE Plastic Non-bottles	0.0%	0.0%	137	Plastic Products	1.2%		7,062
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	126	#1 PETE Plastic Products	0.0%	0.0%	5
#2 HDPE Plastic Colored Bottles	0.0%	0.0%	157	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.1%	0.0%	358	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	1	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	104	#6 PS Plastic Products	0.0%	0.0%	1
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.1%	0.1%	542
#7 Other Plastic Packaging	0.0%	0.0%	160	PLA/Compostable Plastic Products	0.0%	0.0%	14
Expanded Polystyrene Packaging	0.1%	0.1%	383	Plastic Garbage Bags	0.3%	0.4%	1,636
PLA/Compostable Plastic Packaging	0.0%	0.0%	15	Non-bag Plastic Film Products	0.1%	0.2%	856
Plastic Merchandise Bags	0.1%	0.1%	373	Bulky Rigid Plastic Products	0.5%	0.5%	2,922
Non-industrial Packaging Film Plastic	0.3%	0.3%	1,559	R/C Plastic Products	0.2%	0.2%	1,087
Industrial Packaging Film Plastic	0.4%	0.2%	2,262	Consumer Products	1.1%		6,335
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	26	Televisions - LCD	0.0%	0.0%	0
Metal	4.4%		25,962	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.1%	0.1%	315	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	1	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	172	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.1%	441	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	3	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	10
White Goods	0.0%	0.0%	66	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.7%	1.4%	10,275	Other Consumer Electronics	0.0%	0.0%	89
R/C Metals	2.5%	2.4%	14,689	Textiles - Organic	0.0%	0.0%	289
Glass	0.5%		2,683	Textiles - Synthetic, Mixed, Unknown	0.2%	0.2%	1,174
Clear Glass Containers	0.1%	0.1%	578	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.4%	0.5%	2,210
Brown Glass Containers	0.0%	0.0%	0	Furniture	0.4%	0.4%	2,100
Plate Glass	0.0%	0.0%	170	Mattresses	0.1%	0.1%	464
Stoneware/Kitchen Ceramics	0.0%	0.0%	95	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.4%	1,839	Hazardous and Special Waste	0.0%		292
Organics	2.1%		12,114	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.3%	0.4%	1,544	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.2%	0.2%	900	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	45	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.2%	0.3%	1,091	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	1.0%	1.6%	5,999	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.4%	0.5%	2,518	Fluorescent Tubes	0.0%	0.0%	5
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	17	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	137
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	2
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	32.4%		190,810	Oil-based Paint	0.0%	0.0%	0
Treated Wood	3.2%	1.9%	19,068	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	7.9%	4.1%	46,398	Lacquer	0.0%	0.0%	0
Dimensional Lumber	4.9%	2.2%	28,964	Varnish	0.0%	0.0%	0
Engineered Wood	6.0%	5.3%	35,671	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.6%	0.8%	9,635	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.6%	0.4%	3,719	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.8%	1.2%	4,605	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	7.3%	8.1%	42,751	Primers/Sealers	0.0%	0.0%	0
Construction Materials	54.2%		319,840	Stains	0.0%	0.0%	0
Natural Wood	5.8%	9.3%	34,029	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	119
Insulation	0.8%	0.6%	4,848	Solvents	0.0%	0.0%	0
Asphalt Paving	0.8%	0.8%	4,882	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.3%	0.3%	1,989	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	7.3%	4.7%	43,238	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	6.3%	6.7%	37,103	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	5.8%	6.0%	34,476	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.0%	0.9%	5,694	Motor Oil	0.0%	0.0%	29
Asphalt Roofing	21.5%	13.7%	126,864	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.7%	0.8%	4,158	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.4%	0.5%	2,509	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	3.4%	1.9%	20,052	Explosives	0.0%	0.0%	0
Residues	0.2%		1,389	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.1%	0.2%	628	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	13	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.1%	0.2%	748	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count	120			Totals	100%		589,638

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

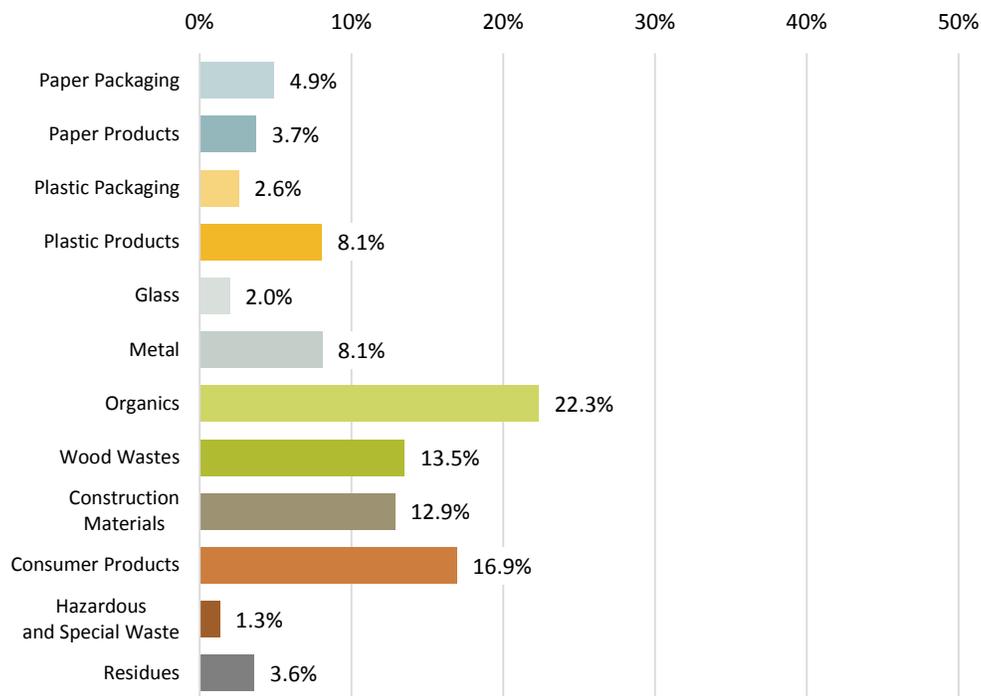
Self-hauled Other Waste

This section characterizes MSW disposed by the self-hauled other sector for the entire State of Washington, combining self-hauled other samples from all six WGAs considered in this study. Composition and quantity data are generated from data collected from the ten counties visited during the 2015-2016 statewide study and use the material list of 156 *material types*.

OVERVIEW BY MATERIAL CLASS

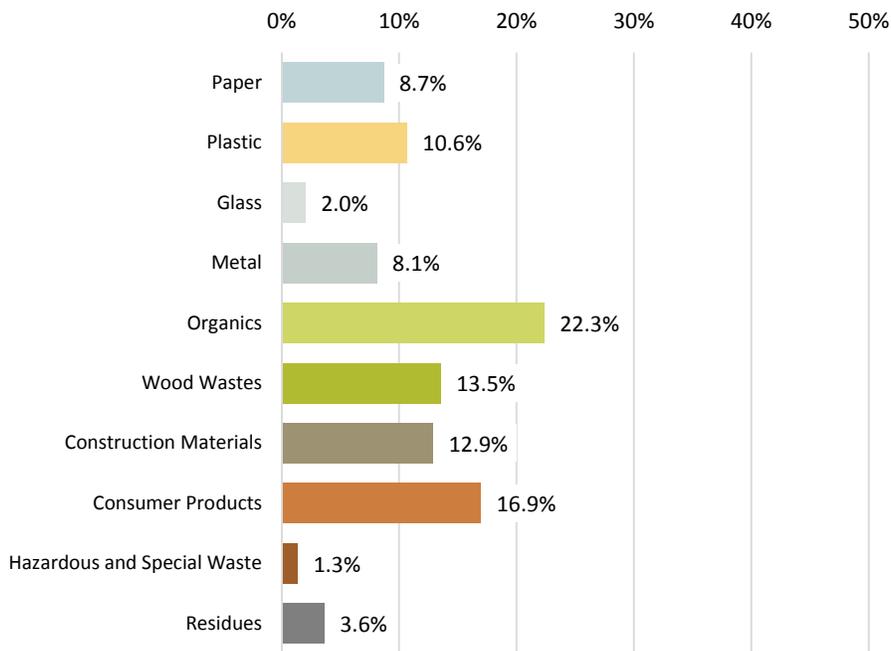
Composition estimates by material class for the statewide self-hauled other disposed waste sector are illustrated in Figure 19. The largest material class in this waste sector is Organics, which account for over one-fifth (22%) of the waste sector by weight, followed by Consumer Products (17%), Wood Wastes (14%), and Construction Materials (13%). See Appendix B: List and Definitions of Material Types for a description of the *material types* included in each material class. Figure 20 illustrates the composition by material class, combining the packaging and product *material types*.

**Figure 19: Self-hauled Other Disposed Waste Sector
Composition by Material Class, 2015-2016**





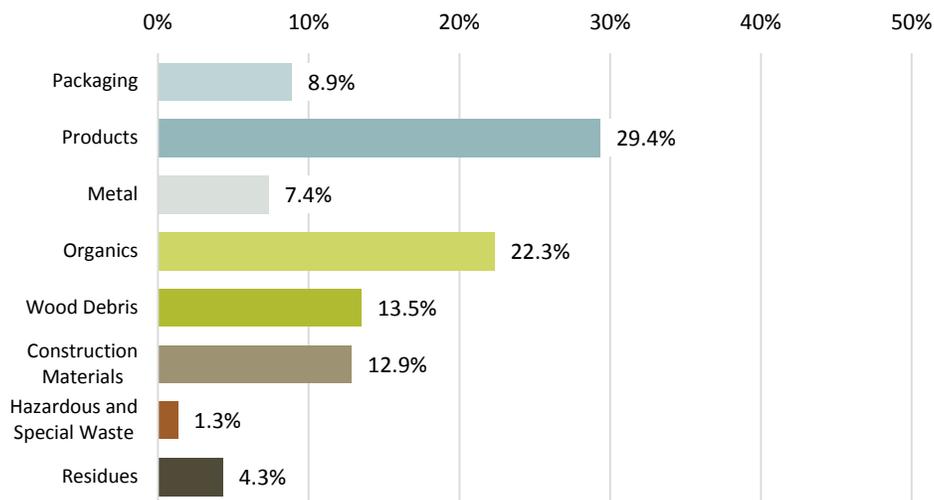
**Figure 20: Self-hauled Other Disposed Waste Sector
Composition by Material Class, Combined Packaging and Products, 2015-2016**



OVERVIEW OF PACKAGING AND PRODUCT MATERIAL GROUPS

As shown in Figure 21, products make up approximately 29 percent of the waste sector. Packaging materials comprise approximately 9 percent of self-hauled other disposed waste. See Appendix B: List and Definitions of Material Types for a description of the *material types* included in packaging, products, and the other groups shown.

**Figure 21: Self-hauled Other Disposed Waste Sector
Packaging, Products, and Other Material Groups, 2015-2016**



FIFTEEN MOST PREVALENT MATERIALS

When combined, the fifteen most prevalent *material types* in the self-hauled other disposed waste sector account for nearly three-fifths (59%) of the waste sector, as shown in Table 16. *Leaves and grass* (7%), *furniture* (6%), *mattresses* (5%), and *painted wood* (5%) are the four most prevalent materials in the self-hauled other disposed waste sector.

**Table 15: Self-hauled Other Disposed Waste Sector
Fifteen Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Yard & Garden Waste - Leaves & Grass	7.3%	7.3%	31,368
Furniture	5.8%	13.1%	24,925
Mattresses	5.4%	18.4%	23,160
Painted Wood	5.0%	23.5%	21,682
Carpet	4.1%	27.6%	17,790
R/C Metals	4.1%	31.7%	17,507
Bulky Rigid Plastic Products	4.0%	35.6%	17,179
Edible Food - Vegetative	3.4%	39.1%	14,742
Yard & Garden Waste - Prunings	3.3%	42.4%	14,214
Disposable Diapers	3.2%	45.6%	13,914
Animal Manure	2.9%	48.5%	12,390
Textiles - Organic	2.7%	51.2%	11,749
Other Ferrous Metal	2.7%	53.9%	11,630
Cardboard/Kraft Paper Packaging	2.6%	56.5%	11,193
Ceramics & Brick	2.6%	59.1%	11,157
Total	59.1%		254,601

Subtotals and totals in tables and figures may not exactly match due to rounding

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington's self-hauled other disposed waste sector are listed in Table 16.

Table 16: Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	4.9%		21,208	Paper Products	3.7%		16,111
Newspaper Packaging	0.0%	0.0%	21	Newspaper	0.4%	0.6%	1,684
Cardboard/Kraft Paper Packaging	2.6%	1.1%	11,193	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	148	Magazines	0.1%	0.1%	354
Mixed/Low Grade Paper Packaging	1.4%	0.7%	6,071	High-Grade Paper Products	0.3%	0.2%	1,320
Aseptic and Polycoat Packaging	0.1%	0.1%	555	Other Groundwood Paper Products	0.0%	0.0%	48
Compostable Paper Packaging	0.4%	0.3%	1,796	Mixed Low Grade Paper Products	0.8%	0.8%	3,615
R/C Paper Packaging	0.3%	0.2%	1,424	Compostable Paper Products	1.9%	1.3%	8,074
Plastic Packaging	2.6%		11,132	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.2%	0.1%	760	R/C Paper Products	0.2%	0.2%	1,016
#1 PETE Plastic Non-bottles	0.2%	0.1%	959	Plastic Products	8.1%		34,759
#2 HDPE Plastic Natural Bottles	0.1%	0.0%	259	#1 PETE Plastic Products	0.0%	0.0%	21
#2 HDPE Plastic Colored Bottles	0.1%	0.1%	564	#2 HDPE Plastic Products	0.0%	0.0%	58
#2 HDPE Plastic Jars & Tubs	0.2%	0.1%	748	#3 PVC Plastic Products	0.0%	0.0%	20
#3 PVC Plastic Packaging	0.0%	0.0%	3	#4 LDPE Plastic Products	0.0%	0.0%	11
#4 LDPE Plastic Packaging	0.0%	0.0%	1	#5 PP Plastic Products	0.0%	0.0%	49
#5 PP Plastic Packaging	0.1%	0.0%	396	#6 PS Plastic Products	0.0%	0.0%	75
#6 PS Plastic Packaging	0.0%	0.0%	3	#7 Other Plastic Products	1.2%	0.5%	5,021
#7 Other Plastic Packaging	0.1%	0.1%	263	PLA/Compostable Plastic Products	0.0%	0.0%	17
Expanded Polystyrene Packaging	0.2%	0.2%	1,027	Plastic Garbage Bags	0.7%	0.3%	3,094
PLA/Compostable Plastic Packaging	0.0%	0.0%	74	Non-bag Plastic Film Products	0.2%	0.2%	839
Plastic Merchandise Bags	0.2%	0.1%	836	Bulky Rigid Plastic Products	4.0%	1.8%	17,179
Non-industrial Packaging Film Plastic	0.8%	0.4%	3,540	R/C Plastic Products	1.9%	1.1%	8,374
Industrial Packaging Film Plastic	0.2%	0.2%	1,066	Consumer Products	16.9%		73,020
Flexible Plastic Packaging	0.0%	0.0%	67	Televisions - CRT	0.2%	0.3%	915
R/C Plastic Packaging	0.1%	0.1%	567	Televisions - LCD	0.0%	0.0%	0
Metal	8.1%		34,835	Television Peripherals	0.1%	0.1%	481
Aluminum Beverage Cans	0.1%	0.0%	357	Computer Monitors - CRT	0.1%	0.1%	390
Aluminum Foil/Containers	0.0%	0.0%	159	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	594	Computers	0.0%	0.0%	65
Other Nonferrous	0.5%	0.4%	1,950	Computer Peripherals	0.2%	0.4%	961
Food Cans - Tinned	0.3%	0.2%	1,308	Computer Printers	0.0%	0.0%	149
Food Cans - Coated	0.0%	0.0%	67	Audio Equipment	0.2%	0.2%	874
White Goods	0.3%	0.3%	1,264	Electronic Gaming Equipment	0.0%	0.0%	55
Other Ferrous Metal	2.7%	0.9%	11,630	Other Consumer Electronics	0.1%	0.1%	295
R/C Metals	4.1%	1.6%	17,507	Textiles - Organic	2.7%	1.6%	11,749
Glass	2.0%		8,560	Textiles - Synthetic, Mixed, Unknown	1.3%	0.7%	5,478
Clear Glass Containers	0.5%	0.3%	1,969	Shoes, Purses, Belts	0.2%	0.1%	705
Green Glass Containers	0.2%	0.2%	956	Tires & Rubber	0.7%	0.4%	2,815
Brown Glass Containers	0.3%	0.2%	1,166	Furniture	5.8%	1.8%	24,925
Plate Glass	0.0%	0.0%	125	Mattresses	5.4%	3.3%	23,160
Stoneware/Kitchen Ceramics	0.3%	0.3%	1,243	R/C Consumer Products	0.0%	0.0%	4
R/C Glass	0.7%	0.7%	3,102	Hazardous and Special Waste	1.3%		5,770
Organics	22.3%		96,280	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	3.4%	1.8%	14,742	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	1.7%	1.2%	7,428	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.5%	1.7%	6,491	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.9%	1.1%	3,918	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	7.3%	5.0%	31,368	Compact Fluorescent Lamps	0.0%	0.0%	13
Yard & Garden Waste - Prunings	3.3%	2.1%	14,214	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	2.9%	1.6%	12,390	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.8%	1.3%	3,332	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	6
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	74
R/C Organics	0.6%	0.5%	2,397	Water Based Glues	0.0%	0.0%	8
Wood Wastes	13.5%		58,247	Oil-based Paint	0.0%	0.0%	193
Treated Wood	0.5%	0.4%	2,269	Oil-based Clear Coatings	0.0%	0.0%	19
Painted Wood	5.0%	4.7%	21,682	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.3%	1.1%	9,752	Varnish	0.0%	0.0%	0
Engineered Wood	1.8%	1.0%	7,942	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.7%	0.5%	3,223	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	1.6%	1.0%	7,098	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.1%	0.1%	422	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.4%	0.9%	5,859	Primers/Sealers	0.0%	0.0%	0
Construction Materials	12.9%		55,453	Stains	0.0%	0.0%	0
Natural Wood	0.9%	0.8%	3,911	Water Repellants	0.6%	0.9%	2,458
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.1%	0.2%	614	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.1%	0.1%	481
Concrete	1.3%	1.0%	5,542	Dry-cell Batteries - Single Use	0.0%	0.0%	42
Drywall	1.3%	1.0%	5,659	Dry-cell Batteries - Rechargeable	0.0%	0.0%	7
Carpet	4.1%	2.8%	17,790	Wet-cell Batteries	0.0%	0.0%	31
Carpet Padding	0.4%	0.2%	1,626	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.3%	1.6%	5,580	Motor Oil	0.1%	0.1%	409
Asphalt Roofing	0.2%	0.2%	710	Antifreeze	0.1%	0.2%	580
Plastic Flooring	0.1%	0.2%	641	Other Vehicle Fluids	0.0%	0.0%	23
Ceramics & Brick	2.6%	2.6%	11,157	Oil Filters	0.1%	0.1%	225
R/C Construction Materials	0.5%	0.4%	2,222	Explosives	0.0%	0.0%	0
Residues	3.6%		15,541	Medical Wastes	0.0%	0.0%	4
Disposable Diapers	3.2%	3.4%	13,914	Sharps	0.0%	0.0%	0
Ash	0.3%	0.5%	1,501	Pharmaceuticals/Vitamins	0.1%	0.1%	252
Dust	0.0%	0.0%	29	Other Cleaners/Chemicals	0.1%	0.1%	276
Fines	0.0%	0.0%	96	Personal Care Products	0.1%	0.2%	594
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	76
Sample Count	121			Totals	100%		430,918

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

4. Comparisons to the Previous Study

Comparing waste composition data collected during the previous statewide study with the current study allows for a useful examination of trends and changes in the waste stream over time. This section presents comparisons at macro-level.

STATISTICAL COMPARISONS

This section presents findings from statistical comparisons between the 2015-2016 waste composition data and data from the previous study period in 2009. The analysis examines statistical differences, using *t*-tests, between the two studies. The analysis is used to determine if changes in the composition of Washington State's disposed waste stream are statistically significant. This report does not attempt an in-depth examination of potential causes of the changes in waste composition over time.

The year-to-year comparisons were made by examining the changes in the composition percentages for selected material groupings. The material groupings included:

- Recyclable Paper
- Recyclable Plastic
- Recyclable Metal
- Recyclable Glass
- Food
- Other Compostables
- Wood/Construction Debris
- E-Waste
- Hazardous and Special Waste
- Other Materials

Statistical tests were used to analyze differences in the composition percentages between years for overall waste.

The differences in material groupings between studies can be divided into three main categories:

- **Statistically significant**—These findings can be considered true differences because the probability of observing these results if there had been no actual year-to-year change is low.
- **Strong trend**—Although the results did not meet the requirements of the study's conservative statistical tests, the data suggest a possibly noteworthy change.
- **Not statistically significant and no strong trend**—the statistical tests did not detect a significant change and the data do not otherwise suggest a noteworthy difference.

Because the waste composition results are expressed as percentages, rather than absolute tonnages, significant changes for one material may affect the percentages for other materials. For example, increases over time in materials recycled may alter the percentages for other materials remaining in the waste stream.

The t-statistic is calculated from the data: according to statistical theory, the larger the absolute value of the t-statistic, the less likely that the two populations have the same mean. The p-value describes the probability of observing the calculated t-statistic if there were no true difference between the population means.

For example, in Table 17 the proportion of recyclable paper in the overall statewide disposed waste stream decreased from 10.6% to 7.6% across the study periods. The t-statistic is relatively large (4.6892) and the probability (p-value) of observing that t-statistic if there had been no true difference between years is less than 0.01%. This value is less than the study’s pre-determined threshold for statistically significant results (alpha-level of 1.0%); thus, the decrease in recyclable paper is considered to be a true difference. On the other hand, the p-value corresponding to the decrease in E-Waste is much smaller (p=0.0389). The chance of observing the 1.4% to 0.8% decrease when the actual proportion had not changed is 3.89%—too high to be considered a true difference.

The proportion of disposal that is recyclable paper showed a statistically significant decrease and the proportion of disposal that is recyclable glass showed a strong downward trend in the overall disposed waste stream. This downward trend in may be due to the investments made by cities and counties in the state to divert recoverable resources from the waste stream. While the source of changes may be impossible to determine, the general decrease in consumption of printed newspapers may also contribute to the observed decrease in recyclable paper. T-test results are shown in the table below.

Table 17. Waste Composition Changes and Trends, 2009 vs. 2015-2016

Material Grouping	Composition*		Change in Composition	t-Statistic	p-Value	Statistically Significant Change*	Strength of Results
	2009	2016					
Recyclable Paper	10.6%	7.6%	-3.0% ↓	4.6892	0.0000	Yes	Statistically Significant
Recyclable Plastic	1.1%	1.0%	-0.1% ↓	0.9277	0.3538	No	
Recyclable Metal	4.0%	3.3%	-0.7% ↓	1.6772	0.0938	No	
Recyclable Glass	1.5%	1.1%	-0.4% ↓	2.3899	0.0170	No	Strong Trend
Food	11.2%	11.3%	0.1% ↑	0.1135	0.9097	No	
Other Compostables	9.7%	10.3%	0.6% ↑	0.6007	0.5482	No	
Wood/Construction Debris	30.1%	31.7%	1.6% ↑	0.7197	0.4719	No	
E-Waste	1.4%	0.8%	-0.6% ↓	2.0679	0.0389	No	
Hazardous and Special Waste	1.3%	1.0%	-0.3% ↓	0.8685	0.3853	No	
Other Materials	29.1%	32.0%	2.9% ↑	1.8307	0.0674	No	
Number of Samples	530	606					

* Composition data is unweighted for the t-test

*Cut-off for statistically significant difference = 0.0100

More detail regarding the material groupings and the statistical analyses can be found in Appendix A: Detailed Methodology.

Appendix A: Detailed Methodology

Developing a Project Plan

Prior to carrying out any of the data-collection strategies—sampling, sorting, and surveying—the Department of Ecology developed a waste characterization project plan that provided the framework for all subsequent data collection and analysis strategies.

Ecology's planning stage included:

1. Selecting representative counties across the state to be visited;
2. Scheduling solid waste disposal facilities, statewide, for surveying and sampling;
3. Defining the waste sectors to be examined during the study; and
4. Creating the list of *material types* to be examined throughout the study.

The following methodology presents a detailed list of actions that Cascadia and our partner in field sampling, Sky Valley Associates, took to plan the field data collection process and analyze the data.

Organizing Data Collection

COORDINATING WITH FACILITIES

Cascadia worked with Ecology to create a questionnaire and conducted a brief interview with the management of each of the ten solid waste facilities recruited by Ecology.

The information collected during these interviews guided us as we scheduled visits, planned a precise data collection strategy for each site, and created vehicle selection forms that allowed for a suitable random selection process. The interviews obtained the following information:

- Contact information for key personnel.
- Days and hours of operation for each facility.
- Approximate numbers of vehicles from each sector (residential, commercial, self-hauled construction and demolition (C&D), and self-hauled other) expected on each day of the week and the likely peak time of day for each type of load.
- Ability and willingness of gatehouse personnel to assist with the vehicle selection process.
- Logistical strategy to determine locations for setting up the work area, taking samples, queuing samples, discarding sorted samples, and other in-process activities.
- Recycling or recovery operations that exist at the facility, and how the study team may obtain samples of waste after any recycling or recovery operations have already been applied to the waste (if applicable).
- Whether the facility is able to provide the use of a loader for obtaining waste samples.
- Unusual conditions (e.g., weather, anomalies in traffic patterns, etc.) that might affect data collection and necessitate special logistical arrangements.
- Facility-specific health and safety procedures and emergency contact numbers.
- Any other concerns that should be addressed prior to sampling.

Consistent and clear communication with the facility management leads to smooth sampling and sorting and to substantial willingness among facility staff to assist us in whatever ways they could. Cascadia contacted the management of each disposal facility two weeks prior to the scheduled visits to address logistical concerns and reiterate any requests for sample collection assistance. A day or two prior to the visit, the Field Manager made a final reminder call to ensure that the facility was ready and to resolve any last-minute issues.

PREPARING DATA FORMS

Customized field forms were developed to correlate to the specific sampling strategy and information needed of this study. These forms included:

- A **Vehicle Selection Form** was created for each day and each location of sampling activity. This form listed the sample quotas specific to each day, by sector, and was used to select vehicles entering the facility in a random manner for sampling.
- A **Sample Placard** was created to flag vehicles selected for sampling. The sample placard is a brightly colored paper sign that was placed on the windshield of every vehicle entering the facility chosen for sampling. The sample placard has the sample number (Res-1, Com-5, and so on) pre-printed on the front and was easily seen and intercepted by the sorting Field Manager.
- A **Waste Sample Tally Sheet** included a list of all materials and cells to record the weights for each material.

Field form applications will be described in more detail below, in Task 4: Sampling and Sorting.

PREPARING THE SORTING CREW

Training

At the outset of each season, the Field Manager and sorting crew familiarized themselves with the materials list, field forms, and any unique sorting protocols that were employed during the season. On site, the Field Manager was present to provide continual support and supervision. Training for the 2015-2016 Washington State study also addressed:

- General facility overviews.
- Facility-specific health and safety requirements.
- Personal protective equipment (PPE) requirements.
- Waste handling techniques.
- Productivity strategies and daily sorting quotas.

The Field Manager ensured that the sorting protocol was followed, along with the health and safety requirements, and closely evaluated each individual sample to ensure that the material categories were understood and were interpreted uniformly by the sorting crew.

Health and Safety

Our team followed a strict health and safety plan that meets Occupational Safety and Health Administration (OSHA) standards.

Equipment

The list of equipment utilized for the sampling and sorting is presented below. The Field Manager stocked extra safety equipment to ensure the safety of observers or others present at the sorting site.

Equipment for sorting:

- Sorting table/stations (1 per sorter)
- 30-50 laundry baskets per waste sector to sort material into
- 1 shovel
- 2 brooms
- 1 digital scale (weighs to 1/10 pound)
- 10-20 tarps
- 4 clipboards
- A 7.1 megapixel standard digital camera
- 2 coolers with cold drinks

Safety equipment:

- Dust masks (1 per person/day)
- Puncture resistant gloves (1 pair per person)
- Glove liners (1 per person/day)
- Safety glasses (1 per person)
- Reflective safety vests (1 per person)
- Hard hats (1 per person)
- Leather work gloves (1 pair per person)
- Safety/medical kit

STATEWIDE SAMPLING STRATEGY

After considering the sampling locations (Table 18) chosen and recruited by Ecology and studying a map of the State of Washington, Cascadia developed a sorting strategy that allowed us to cover ten counties in eleven days. During this period, we visited the four central or eastern facilities during one week and the remaining six western facilities during a second week. We repeated this sampling strategy throughout each of the four seasons, making an attempt to vary the days of the week on which each facility was visited to capture variability associated with days of the week. The sampling calendar is shown in Table 19.

Table 18: Counties and Facilities Visited for Sampling

COUNTY	FACILITY
Chelan	Wenatchee Landfill and Transfer Station
Clallam	Port Angeles Transfer Station
Cowlitz	Waste control 3 rd Ave Transfer Station
Franklin	BDI Transfer Station
Grant	Ephrata Landfill
Grays Harbor	Aberdeen Central Transfer Station
Kitsap	Olympic View Transfer Station
Lewis	Lewis County Central Transfer Station
Skagit County	Skagit County Recycling and Transfer Station
Spokane	Spokane Regional Waste to Energy Facility

APPENDIX A: DETAILED METHODOLOGY

2015-2016 Washington Statewide Waste Characterization Study

Table 19: Sampling Calendar

	Season One: June 2015								
	6/12	6/15	6/16	6/17	6/19	6/22	6/23	6/24*	6/25
Aberdeen Central Transfer Station				X					
BDI Transfer Station						X			
Ephrata Landfill							X		
Lewis County Central Transfer Station			X						
Olympic View Transfer Station		X							
Port Angeles Transfer Station								X	
Skagit County Recycling and Transfer Station					X				
Spokane Regional Waste to Energy Facility									X
Waste Control 3rd Ave Transfer Station	X								
Wenatchee Landfill and Transfer Station								X	

	Season Two: January 2016										
	1/15	1/19	1/20	1/21	1/22	1/25	1/26	1/27	1/28	1/29	1/30
Aberdeen Central Transfer Station			X								
BDI Transfer Station									X		
Ephrata Landfill								X			
Lewis County Central Transfer Station		X									
Olympic View Transfer Station					X						
Port Angeles Transfer Station				X							
Skagit County Recycling and Transfer Station						X					
Spokane Regional Waste to Energy Facility										X	X
Waste Control 3rd Ave Transfer Station	X										
Wenatchee Landfill and Transfer Station							X				

	Season Three: March/April 2016										
	3/21	3/22	3/23	3/24	3/25	3/28	3/29	3/30	3/31	4/1	
Aberdeen Central Transfer Station								X			
BDI Transfer Station											
Ephrata Landfill			X								
Lewis County Central Transfer Station									X		
Olympic View Transfer Station						X					
Port Angeles Transfer Station							X				
Skagit County Recycling and Transfer Station					X						
Spokane Regional Waste to Energy Facility	X	X									
Waste Control 3rd Ave Transfer Station										X	
Wenatchee Landfill and Transfer Station				X							

	Season Four: May 2016										
	5/16	5/17	5/18	5/19	5/20	5/23	5/24	5/25	5/26	5/27	
Aberdeen Central Transfer Station			X								
BDI Transfer Station						X	X				
Ephrata Landfill								X			
Lewis County Central Transfer Station					X						
Olympic View Transfer Station		X									
Port Angeles Transfer Station	X										
Skagit County Recycling and Transfer Station										X	
Spokane Regional Waste to Energy Facility											
Waste Control 3rd Ave Transfer Station				X							
Wenatchee Landfill and Transfer Station									X		

* One field crew worked in Wenatchee this day and second field crew worked in Port Angeles.

Figure 22 and Table 20 summarize the counties in each WGA, the sampled counties, and the counties included in the supplemental analysis.

Figure 22: Map of Waste Generation Areas

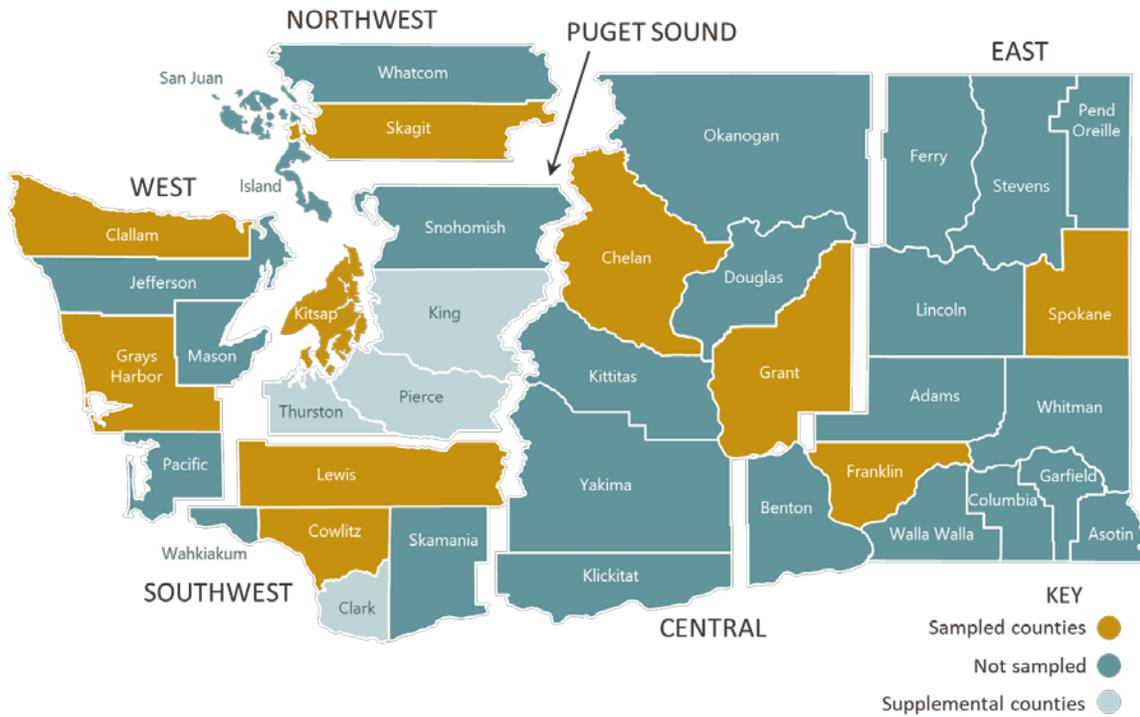


Table 20. Counties Included in Each Waste Generation Area

Central	East	Puget Sound	West
Chelan	Ferry	King	Clallam
Douglas	Lincoln	Kitsap	Grays Harbor
Grant	Pend Oreille	Pierce	Jefferson
Okanogan	Spokane	Snohomish	Mason
Kittitas	Stevens	Thurston	Pacific
Klickitat	Adams		
Yakima	Asotin	Southwest	
	Benton	Clark	Sampled Counties ●
Northwest	Columbia	Cowlitz	Supplemental Counties ●
Island	Franklin	Lewis	
San Juan	Garfield	Skamania	
Skagit	Walla Walla	Wahkiakum	
Whatcom	Whitman		

Table 21 below show all four seasons of planned and actual samples by county.

APPENDIX A: DETAILED METHODOLOGY

2015-2016 Washington Statewide Waste Characterization Study

Table 21: Planned vs. Actual Sample Counts

WGA	County	Season One: June 2015								Season Two: January 2016							
		Com		Res		SH C&D		SH Other		Com		Res		SH C&D		SH Other	
		Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Central	Chelan	5	5	2	2	3	3	2	2	5	5	2	2	3	3	2	2
	Grant	7	7	3	3	2	2	3	3	7	7	3	3	2	2	3	3
East	Franklin	6	6	3	3	2	2	2	2	6	6	3	3	2	2	2	2
	Spokane	8	8	6	6	9	9	9	9	8	8	6	6	9	9	9	9
Northwest	Skagit	7	7	3	3	2	2	2	2	7	7	3	3	2	2	2	2
Puget Sound	Kitsap	6	6	3	3	3	3	2	2	6	6	3	3	3	3	2	2
Southwest	Cowlitz	6	6	3	3	2	2	3	3	6	6	3	4	2	2	3	1
	Lewis	7	7	3	3	3	3	2	2	7	7	3	3	3	3	2	2
West	Clallam	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
	Grays Harbor	6	6	3	3	2	2	3	3	6	6	3	3	2	2	3	3
Totals		60	60	31	31	30	30	30	30	60	60	31	32	30	30	30	29

WGA	County	Season Three: March/April 2016								Season Four: May 2016							
		Com		Res		SH C&D		SH Other		Com		Res		SH C&D		SH Other	
		Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Central	Chelan	6	7	3	3	3	2	3	4	5	5	4	4	3	3	3	3
	Grant	7	7	3	3	2	2	3	3	6	6	4	4	3	3	2	2
East	Franklin	6	0	3	0	3	0	3	0	13	13	6	6	5	5	6	6
	Spokane	6	14	3	4	3	6	3	6	0	0	0	0	0	0	0	0
Northwest	Skagit	6	5	3	3	3	3	3	3	5	5	3	3	4	4	3	3
Puget Sound	Kitsap	6	7	3	2	3	3	3	3	6	6	3	3	3	3	3	3
Southwest	Cowlitz	6	7	3	3	3	3	3	3	6	6	3	3	3	4	3	3
	Lewis	7	7	3	3	3	3	3	3	6	6	3	3	3	3	3	3
West	Clallam	4	4	3	3	4	4	4	4	6	6	3	3	3	3	4	4
	Grays Harbor	6	6	3	3	3	3	3	3	6	6	3	3	3	3	3	3
Totals		60	64	30	27	30	29	31	32	59	59	32	32	30	31	30	30

WGA	County	Totals							
		Com		Res		SH C&D		SH Other	
		Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Central	Chelan	21	22	11	11	12	11	10	11
	Grant	27	27	13	13	9	9	11	11
East	Franklin	31	25	15	12	12	9	13	10
	Spokane	22	30	15	16	21	24	21	24
Northwest	Skagit	25	24	12	12	11	11	10	10
Puget Sound	Kitsap	24	25	12	11	12	12	10	10
Southwest	Cowlitz	24	25	12	13	10	11	12	10
	Lewis	27	27	12	12	12	12	10	10
West	Clallam	14	14	10	10	11	11	12	13
	Grays Harbor	24	24	12	12	10	10	12	12
Totals		239	243	124	122	120	120	121	121

Conducting Fieldwork

OBTAINING SAMPLES

The Field Manager followed a systematic procedure to select vehicles with commercial, residential, self-hauled C&D, and self-hauled other waste for sampling. To calculate vehicle sampling frequency for each waste sector, the project team established a sampling interval for each day of sampling. Sampling intervals were determined by dividing the total expected number of loads for each sector arriving at the facility on the scheduled day—based on information from the disposal facility questionnaire—by the number of samples needed each day. The resulting number is the sampling frequency, which determines whether, for example, every third vehicle, every sixth vehicle, or every 20th vehicle is selected for sampling. This strategy is referred to as “selecting every n^{th} vehicle” within a waste sector. A vehicle selection form was created for each day and each location of sampling activity.

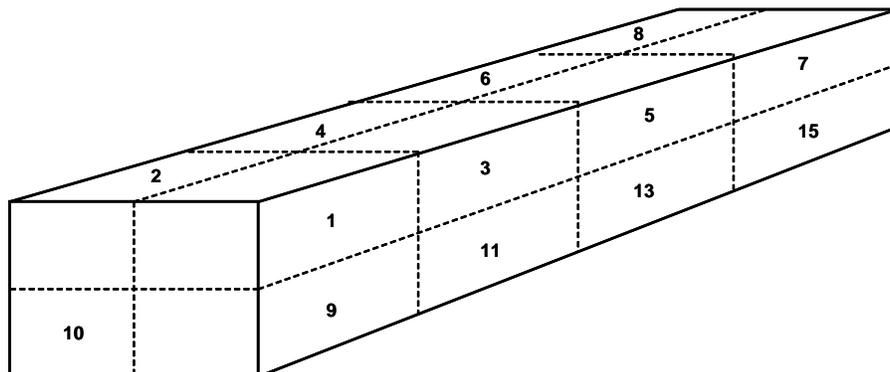
In order for a vehicle to be eligible for sampling, the load had to fit clearly within the commercial, residential, self-hauled C&D and self-hauled other definitions, depending on the targeted waste sector. Samples of commercial and residential waste were obtained from major haulers, such as Waste Management, Republic Services, LeMay, or from municipal haulers.

When the “ n^{th} ” vehicle in each waste sector arrived, a unique, sequential sample identification (ID) number was assigned to the load. That sample ID number was entered on the vehicle selection form, and a unique sample placard was placed in the windshield of the chosen vehicle. The sample ID matched the corresponding waste sector prefix (COM, RES, SH). For example, the first commercial sample ID on a given day was COM-1, while the fourth residential sample ID was RES-4. The brightly colored sample placard alerted the Field Manager and sorting crew to the presence of a sample. Where feasible, the vehicle selection responsibility was handled by the scale house crew, as they were uniquely positioned to count off and select the n^{th} vehicle during the course of the sampling day.

HAND-SORTING SAMPLES

Loads selected to provide hand-sorted samples were extracted from the elongated piles ejected from the dumping vehicle. The Field Manager superimposed an imaginary 16-cell grid (see below) over the dumped material. Then, with the assistance of a loader operator, a sample of waste weighing 225 pounds (on average) was removed from a randomly selected cell and placed on a tarp. Each sample was labeled with the identifying sample ID number and digitally photographed.

Figure 23: The 16-Cell Grid as Applied to a Tipped Load



Our process for hand-sorting samples included the following actions:

1. After each sample of waste was placed on a tarp, photographs of the sample were taken using a digital camera. The sample placard that identified each sample was positioned so it was visible in each photograph.
2. Each sample of waste was then sorted into the *material types*, and the sorting crew used plastic laundry baskets to contain the separated materials. The sorting crew members typically specialized in groups of materials, such as papers or plastics. The Field Manager monitored the homogeneity of material in the baskets as they accumulated, rejecting any materials which may have been improperly classified.
3. The Field Manager then verified the purity of each material as it was weighed in its basket, using a pre-calibrated scale, and recorded each material weight (excluding the weight of the basket) on the sample tally form. The Field Manager oversaw all weighing and data recording of each sample.

At the conclusion of each sorting day, the Field Manager conducted a quality control review of the data recorded on each sample tally sheet. The completed sample tally sheet was transported to the Cascadia Consulting office for data entry.

SITE MAINTENANCE AND CLEANUP

Our field crew took steps to reduce or eliminate the risk of litter, particularly in open-air environments. A thorough clean-up effort followed each day of work and included the following:

- Organizing and stowing sorting supplies in a designated location;
- Removing all sorted waste discarded throughout the day (the host facility loader operator typically helped with removal);
- Sweeping and cleaning the sorting area to prevent windblown litter and other situations that could attract vectors;
- Removing and properly disposing any single-use personal protective equipment; and
- Checking out with the Facility Manager each day.

MANAGING DATA

Our quality assurance/quality control process involved:

- Assigning a unique combination sample number, county of origin, date, and time to each sample and then transferring that information to the tally sheet that was used to record material weights for the sample.
- Encoding the type of waste load into the sample number. For example, on a particular date, samples of commercial waste were numbered Com-1, Com-2, and so on.
- Using the vehicle selection form to track the numbers of each type of load obtained and sampled.
- Verifying that data forms were obtained for each day the data collection crew was in the field.
- Designing the data entry databases to prevent out-of-range values for vehicle and sample characteristics such as vehicle type, net weight, and other factors.
- Randomly checking computer-entered data against the paper forms to verify that numbers were entered correctly and to look for any systematic or random errors.

Following each season of fieldwork, all field forms were transported back to Cascadia's office and entered into a waste composition database created specifically for the 2015-2016 Washington statewide study. Our

team's data entry procedure was developed to protect the integrity of the data at every step of the process, from collection in the field to final analysis.

After the sample tally sheets were checked by the Field Manager, the Data Manager verified that all required data had been recorded properly and supervised the data entry process. As an additional step in quality control, randomly selected records were inspected in detail to monitor the accuracy of the data entry process.

Collecting Composition and Quantity Data

The sample data collected in the field provided Ecology with the *percentages* of the various materials found in the waste sector, but not the *tonnages*. To determine how many tons of disposed waste were associated with each of the waste sectors addressed in the study, we gathered tonnage data from vehicle surveys carried out at each of the ten sampling facilities.

We began the tonnage data collection process by gathering tonnage data during the pre-fieldwork conversations with facilities that we expected to visit. The collection of this data involved conversations, faxes, or the collection of transaction logs. It should be noted that facilities do not always track data in a consistent manner, and availability varies from facility to facility. Therefore, Cascadia needed to interpret some of the data to create comparable information.

Vehicle Surveys

Vehicle surveys were administered to the drivers of each vehicle entering the facility through the gate at which the surveyor was posted. If the facility had multiple gates (such as the Spokane Regional Waste to Energy Facility), then the surveyor rotated among the gates at regular intervals of approximately one hour. The number of vehicles surveyed at each facility is presented in Table 22.

Table 22: Vehicle Surveys Conducted, by County and Facility

COUNTY	FACILITY	VEHICLES SURVEYED
Chelan	Wenatchee Landfill and Transfer Station	83
Clallam	Port Angeles Transfer Station	245
Cowlitz	Waste Control 3 rd Ave Transfer Station	235
Franklin	BDI Transfer Station	235
Grant	Ephrata Landfill	169
Grays Harbor	Aberdeen Central Transfer Station	258
Kitsap	Olympic View Transfer Station	442
Lewis	Lewis County Central Transfer Station	427
Skagit County	Skagit County Recycling and Transfer Station	382
Spokane	Spokane Regional Waste to Energy Facility	256
Total		2,732

The ultimate product of the survey data was an estimate of the fraction of the overall waste sector contributed by each of the waste sectors at each participating facility.

On survey days, the surveyor arrived at the site at the scheduled start time, which was assigned to permit full coverage throughout the day and at times of greatest traffic at the facility. The surveyor introduced himself or herself to the scalehouse staff and verified the procedure for administering the survey that day by confirming several key details:

- The procedure for obtaining vehicle net weights.
- Any rules the facility used for assigning a minimum net weight to certain types of vehicles, such as those carrying self-hauled loads.
- Any rules governing the assignment of net volume estimates instead of net weights.

The surveyor positioned himself or herself at the designated entrance to the facility and interviewed the driver of each passing vehicle. The information gathered through the interview included the following:

- The waste sector (residential, commercial, self-hauled C&D, and self-hauled other).
- In cases where loads were composed of waste from multiple sectors, the estimated proportions of the sectors represented in the load.
- The activity that generated the waste.
- Vehicle type.

An example vehicle survey form that was used to collect the data is included in Appendix C: Forms Used During the Study. At most of the facilities, it was possible for the surveyor to obtain net weights for vehicles by observing the weighing process at the scalehouse and recording the weight at the same moment the

vehicle drove across the scales. In some cases, the surveyor coordinated with scalehouse personnel periodically throughout the day to obtain weight tickets (transaction receipts) corresponding to every load of waste brought to the facility.

In all cases, the surveyor recorded the type of waste and net weight, net volume, or default assigned weight for every vehicle encountered that was carrying disposed waste that did not come from another solid waste facility. The survey did not record loads of non-disposed waste, material to be recycled or recovered, Alternative Daily Cover, or material brought from transfer stations or other solid waste or recovery facilities.

Collected survey data were checked for accuracy in the field. The surveyor checked the forms to ensure that all appropriate information had been gathered. The survey supervisor checked the surveys after they were returned to the office to confirm that all the required data was properly entered. Survey entries with errors or that were incomplete were not used.

The survey data were entered into a Microsoft Access database. Following data entry, the entries were compared with the written field records. Any data entry errors were addressed. In cases where data entry errors or omissions could not be resolved, the entry was ignored during the calculations.

Explaining the Calculations and Statistical Procedures Used

Data from vehicle surveys and the sorting of waste samples were analyzed to yield estimates of percentages and tonnages of *material types* in Washington's waste stream. This section describes the methodology used to obtain each estimate and its associated confidence interval (error range).

The general calculation strategy involved two basic practices: (1) the use of ratio estimators to determine the composition percentages of the waste stream and (2) aggregation of sample data from the waste generation area (WGA) level to the statewide level.

QUANTIFYING DISPOSED WASTE

Disposed waste from each sector was quantified through the use of vehicle surveys, phone surveys, and tonnage reports. The calculation method is described below.

Step 1: Aggregating Survey Records to Produce Findings at the Facility Level. For a given facility on a given day, each vehicle that was included in the gatehouse survey had its net weight assigned to one or more of the established waste sectors, according to the response of the driver. Thus, the tonnage from each vehicle was assigned or apportioned to one or more of the commercial, residential, self-hauled C&D, or self-hauled other sectors. The tonnages identified through the survey were used to calculate the relative proportions of the waste associated with each sector.

Each facility visited provided its disposed tonnage for the calendar year 2015-2016. The relative proportions described above were applied to these reported figures to produce estimates of the tons of disposed waste associated with each sector at the facility in question.

For example, suppose that Facility A was visited on two days. Suppose that Facility A also provided transaction records for 2015-2016. The following scenario describes how the percentages of waste for each sector were calculated for this facility.

First, survey data from the facility for the two days the survey crew was present were examined to determine the tons associated with the studied sectors. A hypothetical accounting of tonnages from two daily transaction reports is shown below. Example numbers are rounded and decimals are not carried through calculations.

	CONTRACTED		SELF-HAULED		TOTAL
Facility A	Commercial	Residential	Self-hauled C&D	Self-hauled Other	
Tonnage from survey day 1	20	20	15	15	70
Tonnage from survey day 2	30	15	20	10	75
Tonnage for two days	50	35	35	25	145

Next, the tonnages were converted into percentages within the franchised and self-hauled categories, as shown below.

	CONTRACTED			SELF-HAULED		
Facility A	Commercial	Residential	Total Contracted	Self-hauled C&D	Self-hauled Other	Total Self-hauled
Tonnage for two days	50	35	85	35	25	60
Percentages	59%	41%	100%	58%	42%	100%

These percentages were then applied to the annual contracted and self-hauled tonnages from transaction records supplied by the facility. Suppose that Facility A accepted 15,000 tons of waste in 2015-2016, of which 10,000 tons came from contracted haulers and 5,000 came from self-haulers. Quantities would be assigned to each sector as shown in the table below.

APPENDIX A: DETAILED METHODOLOGY

2015-2016 Washington Statewide Waste Characterization Study

	CONTRACTED		SELF-HAULED	
	Commercial	Residential	Self-hauled C&D	Self-hauled Other
Facility A				
Total Annual Tons	10,000		5,000	
Tons per sector	5,900	4,100	2,900	2,100

Step 2: Aggregating Tonnage from Facilities to Produce Findings at the WGA Level. Tonnage estimates for each type of waste were combined for participating facilities within each WGA, using a weighted averaging method. The tonnage estimates for each type of waste at all participating facilities within a WGA were aggregated, and relative proportions were calculated for each sector. The aggregated proportions for each sector were then applied to the total 2014 disposal figure for the WGA, as reported by the Department of Ecology. For example, hypothetical annual tonnages by sector for two facilities visited in a WGA are shown in the table below.

	COMMERCIAL	RESIDENTIAL	SELF-HAULED C&D	SELF-HAULED OTHER	TOTAL
Facility A	5,900	4,100	2,900	2,100	15,000
Facility B	150,000	80,000	30,000	5,000	265,000
Total (tons)	155,900	84,100	32,900	7,100	280,000
% of Total	56%	30%	12%	2%	100%

Using an annual tonnage for this WGA of 2,000,000 tons, we can assign tonnages to the four waste sectors according to the percentages from the survey data.

WGA 1	COMMERCIAL	RESIDENTIAL	SELF-HAULED C&D	SELF-HAULED OTHER	TOTAL
Percent	56%	30%	12%	2%	100%
Tons	1,120,000	600,000	240,000	40,000	2,000,000

The estimated annual tons by sector and WGA calculated in this step are the weighting factors used when aggregating composition data across strata.

Step 3: Aggregating WGA Findings to Produce Sector Tonnage Estimates Statewide. The relative proportions of disposed waste corresponding to each sector were combined among WGAs using a weighted aggregation method. The weightings associated with each WGA were proportional to the total disposed tonnage for the WGA for calendar year 2014. This step resulted in a final set of proportions reflecting the relative disposal of waste corresponding to each waste sector statewide. The proportions were then multiplied by the total 2014 statewide disposal figure to produce the statewide tonnage estimate associated with each sector.

	COMMERCIAL	RESIDENTIAL	SELF-HAULED C&D	SELF-HAULED OTHER	TOTAL
WGA 1	1,120,000	600,000	240,000	40,000	2,000,000
WGA 2	550,000	375,000	118,000	82,000	1,125,000
WGA 3	690,000	410,000	73,000	127,000	1,300,000
Total	2,360,000	1,385,000	431,000	249,000	4,425,000

The actual 2014 figures for disposed tonnage associated with each WGA are shown in Table 23 below.

Table 23: Annual Disposed Tonnage by Waste Generation Area 2014

WASTE GENERATION AREAS	ANNUAL DISPOSED TONNAGE
Central WGA	518,121
East WGA	737,889
Northwest WGA	278,420
Puget Sound WGA	2,463,256
Southwest WGA	423,608
West WGA	168,243
Total	4,589,537

ESTIMATING WASTE COMPOSITION

Developing the waste characterization and quantity profiles for this study included two major steps as follows:

1. Calculate the estimated composition of all samples in a given sector and WGA, based on the sample weight.

2. Combine the results for individual sectors and WGA, using a weighted average procedure, to produce findings for combined sectors.

In the descriptions of calculation methods, the following variables are used frequently:

- i denotes an individual sample
- j denotes the *material type*
- c_j is the weight of the *material type j* in a sample
- w is the weight of an entire sample
- r_j is the composition estimate for material j (r stands for *ratio*)
- a denotes a WGA (a stands for *area*)
- s denotes a particular sector of the waste sector
- n denotes the number of samples in the particular group that is being analyzed at that step

Estimating the Composition

The following method was used to estimate the composition of waste belonging to the commercial, residential, self-hauled C&D, and self-hauled other sectors.

For a given stratum (that is, for the samples belonging to the same waste sector within the same WGA), the composition estimate denoted by r_j represents the ratio of the component's weight to the total weight of all the samples in the stratum. This estimate was derived by summing each component's weight across all of the selected samples belonging to a given stratum and dividing by the sum of the total weight of waste for all of the samples in that stratum, as shown in the following equation:

$$r_j = \frac{\sum_i c_{ij}}{\sum_i w_i} \quad (1)$$

where:

- c = weight of particular component
- w = sum of all component weights
- for $i = 1$ to n , where n = number of selected samples
- for $j = 1$ to m , where m = number of components

For example, the following simplified scenario involves three samples. For the purposes of this example, only the weights of the component *carpet* are shown.

	SAMPLE 1	SAMPLE 2	SAMPLE 3
Weight (c) of carpet	5	3	4
Total Sample Weight (w)	80	70	90

$$r_{Carpet} = \sum \frac{5 + 3 + 4}{80 + 70 + 90} = 0.05$$

To find the composition estimate for the component *carpet*, the weights for that material are added for all selected samples and divided by the total sample weights of those samples. The resulting composition is 0.05, or 5 percent. In other words, 5 percent of the sampled material, by weight, is *carpet*.

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

$$\text{Var}(r_j) \approx \left(\frac{1}{n}\right)\left(\frac{1}{\bar{w}^2}\right)\left(\frac{\sum_i (c_{ij} - r_j w_i)^2}{n-1}\right) \quad (2)$$

where:

$$\bar{w} = \frac{\sum_i w_i}{n} \quad (3)$$

(For more information regarding Equation 2, refer to *Sampling Techniques, 3rd Edition* by William G. Cochran [John Wiley & Sons, Inc., 1977].)

Second, the error range at the 90 percent confidence level was calculated for a component's mean as follows:

$$r_j \pm (z\sqrt{\text{Var}(r_j)}) \quad (4)$$

where z = the value of the z -statistic (1.645) corresponding to a 90 percent confidence level.

Composition results for strata were then combined, using a weighted averaging method, to estimate the composition of larger portions of the waste sector. The relative tonnages associated with each stratum served as the weighting factors. The calculation was performed as follows:

$$O_j = (p_1 * r_{j1}) + (p_2 * r_{j2}) + (p_3 * r_{j3}) + \dots \tag{5}$$

where:

- p = the proportion of tonnage contributed by the noted waste stratum (the weighting factor)
- r = ratio of component weight to total waste weight in the noted waste stratum (the composition percent for the given material component)
- for $j = 1$ to m , where m = number of material components

For example, the above equation is illustrated here using three waste strata.

	STRATUM 1	STRATUM 2	STRATUM 3
Ratio (r) of carpet	5%	10%	10%
Tonnage	25,000	100,000	50,000
Proportion of tonnage (p)	14.3%	57.1%	28.6%

To estimate the portion of larger portions of the waste stream, the composition results for the three strata are combined as follows.

$$O_{Carpet} = (0.143 * 0.05) + (0.571 * 0.10) + (0.286 * 0.10) = 0.093 = 9.3\%$$

Therefore, 9.3 of this examined portion of the waste stream is *carpet*.

The variance of the weighted average was calculated as follows:

$$\text{Var}(O_j) = (p_1^2 \text{Var}(r_{j1})) + (p_2^2 \text{Var}(r_{j2})) + (p_3^2 \text{Var}(r_{j3})) + K \tag{6}$$

At the statewide level there are 24 weighting factors (one factor for each of the four sectors in each of the six WGA).

STATISTICAL COMPARISONS BETWEEN STUDIES

This report compares the statewide composition from the current 2015-2016 statewide study and the 2009 statewide study. The purpose of this comparison is to identify changes in the composition of the waste stream over time. The reasons why or how these changes occurred are not investigated. Future studies could be designed to identify the potential causes of these variations.

In order to control for population changes and other factors that may influence the total amount of waste disposed from year to year, the tests described in this appendix measure waste proportions, not tonnage. For example, if newspaper accounts for 5% of disposed waste totaling 1,000 tons during one study period and 5% of waste totaling 1,200 tons during another—while the amount of newspaper in terms of total tons has increased, the proportion of newspaper, 5%, in the waste stream has not. The tests would indicate no change in newspaper.

The statistical tests used assume the hypothesis that there has been no change. For example, “There is no statistically significant difference, between the 2009 and 2015-2016 study periods in the proportion of disposed newspaper statewide.” Statistics are then employed to look for evidence disproving the no-change hypothesis. A “significant” result means that there is enough evidence to disprove the hypothesis and that it can be concluded that there is a true difference in composition over time. “Insignificant” results indicate that either 1) there is no true difference, or 2) even though there may appear to be a difference, there is not enough evidence to prove it because the findings are limited by sample size. It is also possible that changes occurred in waste categories that were not considered in this part of the analysis. Table 24 lists the ten waste categories chosen for analysis. Composition variations were measured for the overall statewide waste stream only.

Table 24: T-test Material Groupings

2015-2016 Statewide Study	2009 Statewide Study	Supplemental Analysis (rolled-up)	T-test Categories
Paper	Paper	Paper	
Newspaper Products	Newspaper Packaging	Newspaper	Recyclable Paper
Newspaper Packaging	Newspaper		
Cardboard/Kraft Products	Cardboard/Kraft Paper Packaging	Corrugated Cardboard	Recyclable Paper
Cardboard/Kraft Packaging	Cardboard/Kraft Paper Products		
High-grade Papers	Other Groundwood Paper Packaging	Mixed Grade Paper	Recyclable Paper
Magazines	Mixed/Low Grade Paper Packaging		
Mixed/Low Grade Packaging	Magazines		
Mixed Low Grade Paper Products	High-Grade Paper Products		
Aseptic and Polycoat Packaging	Other Groundwood Paper Products		
Groundwood Products	Mixed Low Grade Paper Products		
Other Groundwood Packaging			
Compostable Paper Packaging	Compostable Paper Packaging	Compostable Paper	Other Compostables
Compostable Paper Products	Compostable Paper Products		
R/C Paper Products	R/C Paper Packaging	Remainder/ Composite Paper	Other Materials
R/C Paper Packaging	Paper Processing Sludge		
Paper Processing Sludge	R/C Paper Products		

Table 24: T-test Material Groupings, continued

2015-2016 Statewide Study	2009 Statewide Study	Supplemental Analysis (rolled-up)	T-test Categories
Plastic	Plastic	Plastic	
#1 PET Bottles	#1 PETE Plastic Bottles	#1 PET Bottles	Recyclable Plastic
#2 HDPE Colored Bottles	#2 HDPE Plastic Natural Bottles	#2 HDPE Bottles	Recyclable Plastic
#2 HDPE Natural Bottles	#2 HDPE Plastic Colored Bottles		
Plastic Garbage Bags	Plastic Garbage Bags	Plastic Bags and Film	Other Materials
Plastic Merchandise Bags	Plastic Merchandise Bags		
Non-bag Plastic Film Products	Plastic Film Products		
Flexible Plastic Packaging	Industrial Packaging Film Plastic		
Industrial Plastic Packaging Film	Non-industrial Packaging Film Plastic		
Non-industrial Plastic Packaging Film			
R/C Plastic Packaging	R/C Plastic Packaging		
R/C Plastic Products	R/C Plastic Products		
Expanded Polystyrene Packaging	PLA Packaging		
PLA/Compostable Product	PLA Products		
PLA/Compostable Packaging	#1 PETE Plastic Products		
#1 PET Product	#2 HDPE Plastic Products		
#2 HDPE Product	#3 PVC Plastic Products		
#3 PVC Product	#4 LDPE Plastic Products		
#4 LDPE Product	#5 PP Plastic Products		
#5 PP Product	#6 PS Plastic Products		
#6 PS Product	#7 Other Plastic Products		
#7 Other Product	#1 PETE Plastic Non-bottles		
Bulky Rigid Plastic Products	#2 HDPE Plastic Jars & Tubs		
#1 PET Non-bottles	#3 PVC Plastic Packaging		
#2 HDPE Jars & Tubs	#4 LDPE Plastic Packaging		
#3 PVC Packaging	#5 PP Plastic Packaging		
#4 LDPE Packaging	#6 PS Plastic Packaging		
#5 PP Packaging	#7 Other Plastic Packaging		
#6 PS Packaging			
#7 Other Packaging			

Table 24: T-test Material Groupings, continued

2015-2016 Statewide Study	2009 Statewide Study	Supplemental Analysis (rolled-up)	T-test Categories
Glass	Glass	Glass	
Clear Glass Containers	Clear Glass Containers	Glass Bottles and Containers	Recycleable Glass
Green Glass Containers	Green Glass Containers		
Brown Glass Containers	Brown Glass Containers		
Plate Glass	Plate Glass	Remainder/ Composite Glass	Other Materials
R/C Glass	R/C Glass		
Compact Fluorescent Lamps	Compact Fluorescent Lights		
Fluorescent Tubes	Fluorescent Tubes		
	Stoneware/Kitchen Ceramics/Glassware		
Metal	Metal	Metal	
Aluminum Beverage Cans	Aluminum Beverage Cans	Aluminum Cans	Recyclable Metal
Food Cans - Coated	Food Cans - Tinned	Tin Cans	Recyclable Metal
Food Cans - Tinned	Food Cans - Coated		
Other Ferrous Metal	Other Ferrous Metal	Other Ferrous Metals	Recyclable Metal
Other Non-ferrous Metal	Aluminum Foil/Containers	Other Non-Ferrous Metals	Recyclable Metal
Aluminum Foil/Containers	Other Aluminum		
Other Aluminum	Other Nonferrous		
R/C Metal	White Goods	Remainder/ Composite Metals	Other Materials
White Goods	R/C Metals		
Organics	Organics	Organics	
Edible Food - Meat, Fats, Oils	Food - Vegetative	Food	Food
Edible Food - Vegetative	Food - Non-vegetative		
Inedible Food - Meats, Fats, Oils			
Inedible Food - Vegetative			
Yard & Garden Waste, Leaves & Grass	Leaves & Grass	Green Waste	Other Compostables
Yard & Garden Waste, Prunings	Prunings		
Crop Residues	Crop Residues		
Fruit Waste	Fruit Waste		

Table 24: T-test Material Groupings, continued

2015-2016 Statewide Study	2009 Statewide Study	Supplemental Analysis (rolled-up)	T-test Categories
Wood Waste	Wood Waste	Wood Waste	
Dimensional Lumber	Dimensional Lumber	Lumber and Pallets	Wood/Construction Debris
Engineered Wood	Engineered Wood		
Other Untreated Wood	Pallets & Crates		
Pallets & Crates	Other Untreated Wood		
R/C Wood	Treated Wood	Remainder/ Composite Wood	Wood/Construction Debris
Wood By-Products	Painted Wood		
Painted Wood	Wood By-Products		
Treated Wood	R/C Wood Debris		
Construction Materials	Construction Materials	Construction Materials	
Asphalt Roofing	Asphalt Roofing	Asphalt Roofing	Wood/Construction Debris
Drywall	Drywall	Drywall	Wood/Construction Debris
Carpet	Carpet	Carpet & Carpet Padding	Wood/Construction Debris
Carpet Padding	Carpet Padding		
Natural Wood	Natural Wood	Natural Wood	Wood/Construction Debris
Asphalt Paving	Asphalt Paving	Other C&D	Wood/Construction Debris
Ceramics & Brick	Ceramics & Brick		
Concrete	Concrete		
Insulation	Insulation		
Plastic Flooring	Plastic Flooring		
Plastic Lumber	R/C Construction Materials		
R/C Construction			
Non-glass Ceramics			

Table 24: T-test Material Groupings, continued

2015-2016 Statewide Study	2009 Statewide Study	Supplemental Analysis (rolled-up)	T-test Categories
Other Materials	Other Materials	Other Materials	
Medical Wastes	Medical Wastes	Medical/ Pharmaceutical Waste	Hazardous and Special Waste
Pharmaceuticals/ Vitamins	Pharmaceuticals/ Vitamins		
Sharps			
Dry-cell Batteries - Rechargeable	Dry-cell Batteries	Household Batteries	Hazardous and Special Waste
Dry-cell Batteries - Single Use			
Gasoline/Kerosene	Gasoline/Kerosene	Other Hazardous Wastes	Hazardous and Special Waste
Antifreeze	Antifreeze		
Motor Oil	Motor Oil		
Oil Filters	Oil Filters		
Oil-based Clear Coatings	Oil-based Paint & Solvent		
Oil-based Paint	Solvent-based Glues		
Solvents	Latex-based Glues		
Solvent-based Glues	Pesticides/Herbicides		
Water Based Glues	Caustic Cleaners		
Fungicides	Other Cleaners & Soaps		
Herbicides	Asbestos		
Pesticides	Explosives		
Caustic Cleaners	Other Hazardous		
Other Cleaners/Chemicals	Latex Paint		
Asbestos	Wet-cell Batteries		
Concrete/Masonry/ Wood Waterproofers	Mercury Vapor Lighting		
Deck Coatings/Floor Paint	Other Vehicle Fluids		
Explosives	Other Non-hazardous		
Fertilizers			
Field/Lawn Markings			
HID Lamps			
Lacquer			
Other Potentially Hazardous Waste			
Other Vehicle Fluids			
Personal Care Products			
Primers/Sealers			
Rust Preventive Coatings			
Stains			
Urethane Coatings			
UV/Germicidal Lamps			
Varnish			
Water Based Paints			
Water Repellants			
Wet-cell Batteries			

Table 24: T-test Material Groupings, continued

2015-2016 Statewide Study	2009 Statewide Study	Supplemental Analysis (rolled-up)	T-test Categories
Other Materials	Other Materials	Other Materials	
Television Peripherals	VCR's, DVD's, DVR's	E-Waste	E-Waste
Televisions - CRT	Televisions - CRT		
Televisions - LCD	Televisions - LCD		
Audio Equipment	Audio Equipment		
Computer Monitors - CRT	Computer Monitors - CRT		
Computer Monitors - LCD	Computer Monitors - LCD		
Computer Peripherals	Computer Peripherals		
Computer Printers	Computers		
Computers	Gaming Equipment		
Electronic Gaming Equipment	Other Consumer Electronics		
Other Consumer Electronics			
Shoes, Purses, Belts	Shoes, Purses, Belts	Textiles and Clothing	Other Materials
Textiles - Organic	Textiles - Organic		
Textiles - Synthetic, Mixed, Unknown	Textiles - Synthetic		
Disposable Diapers	Disposable Diapers	Disposable Diapers	
Tires & Rubber	Tires & Rubber	Tires and Rubber	
Furniture	Furniture	Furniture	
Mattresses	Mattresses	Mattresses	
Animal Manure	Animal Manure	Animal Excrement	
Ash	Ash	Other Materials	
Dust	Dust		
Fines/Sorting Residue	Fines		
Sludge/Special Industrial	Sludge/Special Industrial		
Soil, Rocks, Sand	Soil, Rocks, Sand		
R/C Consumer Products	R/C Consumer Products		
R/C Organics	R/C Organics		
Animal Carcasses	Animal Carcasses		

STATISTICAL CONSIDERATIONS

The analyses are based on the component percentages, by weight, for the overall statewide disposed waste. These percentages are calculated by dividing the sum of the selected component weights by the sum of the corresponding sample weights. T-tests (modified for ratio estimation) were used to examine the study year-to-study year variation.

Normality

The distribution of some of the waste categories (particularly the hazardous materials) are skewed and may not follow a normal distribution. Although t-tests assume a normal distribution, they are very robust to departures from this assumption, particularly with large sample sizes. In addition, most of the selected categories are sums of several individual waste components, which improves our ability to meet the assumptions of normality.

Dependence

There may be dependence between waste types. (For example, if a person disposes of material A, they always dispose of material B at the same time.) There is certainly a degree of dependence between the calculated percentages. (Since the percentages sum to 100, if the percentage of material A increases, the percentage of some other material must decrease.) This type of dependence is somewhat controlled by choosing only a portion of the waste categories for the analyses. Future studies might examine these two types of dependence explicitly.

Multiple T-Tests

In all statistical tests, there is a chance of incorrectly concluding that a result is significant. The year-to-year comparison required conducting several t-tests (one for each waste category), each of which carries that risk. However, we were willing to accept only a 10% chance overall of making an incorrect conclusion. Therefore, each test was adjusted by setting the significance threshold to $\frac{0.10}{w}$ (where w = the number of t-tests).

The adjustment can be explained as follows:

For each test, we set a $1 - \frac{0.10}{w}$ chance of not making a mistake, which results in a $\left(1 - \frac{0.10}{w}\right)^w$ chance of not making a mistake during all w tests.

Since one minus the chance of not making a mistake equals the chance of making a mistake, by making this adjustment, we have set the overall risk of making a wrong conclusion during any one of the tests at

$$\left(1 - \left(1 - \frac{0.10}{w}\right)^w\right) = 0.10.$$

The chance of a “false positive” for this study is restricted to 10% overall, or 1.0% for each test (10% divided by the ten tests within the overall statewide disposed waste equals 1.0%).

For more detail regarding this issue, please refer to Section 11.2 “The Multiplicity Problem and the Bonferroni Inequality” of *An Introduction to Contemporary Statistics* by L.H. Koopmans (Duxbury Press, 1981).

Power Analysis

The greater the number of samples, the greater the ability to detect differences. In the future, an *a priori* power analysis might be used to determine how many samples would be required to detect a particular minimum difference of interest.

INTERPRETING THE CALCULATION RESULTS

The following tables summarize the t-test findings. The findings can be grouped into two main categories:

- **Statistically significant.** These findings can be considered true differences. The probability of observing these results if there had been no actual year-to-year change is low (10% for all tests within each substream). An asterisk notes the statistically significant differences.
- **Strong trends.** Although the results did not meet the requirements of the study’s conservative statistical tests, there does seem to be a possible indication of change.

For the purposes of this study, only those calculation results with a p-value of less than 1.0% are considered to be statistically significant. As described above, the threshold for determining statistically significant results (the “alpha-level”) is conservative, accounting for the fact that so many individual tests were calculated.

Appendix B: List and Definitions of Material Types

Introduction

The list and definitions of the *material types* used in this study are shown below. The field crew sorted materials into the 156 *material types* defined below. This list of *material types* was designed to be “rolled up” into a condensed list used for presenting results of this study combined with the results from other waste characterization studies from around the state.

The complete list developed for this study is shown below followed by detailed definitions for each *material type*. The rolled up material list used for the supplemental study, with the corresponding materials from the seven additional city and county studies, is shown in Appendix E: Supplemental Composition Results.

List of Material Types

As part of the 2015-2016 Statewide Waste Characterization Study, solid waste was sorted into the 156 *material types*, and composition percentages as well as quantities were calculated for those *material types*.

When sorting materials whether an item is a package or a product is not always clear and sometimes involves a judgment call on the part of the field crew. An example of an unclear item is a single use plastic “Solo” cup. The field crew used the following rubric when making judgement calls:

- If the item in hand was purchased because of what it is, it was sorted as a product.
- If the item in hand was purchased because of what it contained, it was sorted as a package.

Returning to the single use plastic cup example. If, in the sorters judgement, the cup was disposed because a customer went to the grocery store, bought a package of cups, held a birthday party and served soda in the cups, and then disposed the cups, the cups were a product (they were purchased because they were a cup that might prove useful at a future date). If, in the sorters judgement, a customer went to a restaurant and bought a soda in a plastic cup and then disposed of the cup, it was sorted as a package. In that scenario, the customer purchased soda, the cup just happened to be the container used to transport the soda.

This distinction was made because it can be relatively easily, consistently, and efficiently, implemented across seasons, facilities, and material types and explained to users of the waste characterization data.

MATERIAL TYPES ORGANIZED BY MATERIAL CLASSES

The list below shows the complete list of material classes and *material types* used in the study.

Why 156 Material Types?

The types and quantities of materials in our waste streams are always in flux and therefore, so are the possibilities for recovery. Ecology chose these 156 material types as a way to track current reuse/recycling programs while looking forward toward the creation of future stewardship

APPENDIX B: LIST AND DEFINITIONS OF MATERIAL TYPES

2015-2016 Washington Statewide Waste Characterization Study

Table 25: List of Material Types

Material Class Material Type	Material Class Material Type
Paper Packaging	Paper Products
Newspaper Packaging	Newspaper Products
Cardboard/Kraft Packaging	Cardboard/Kraft Products
Other Groundwood Packaging	Magazines
Mixed/Low Grade Packaging	High-grade Papers
Aseptic and Polycoat Packaging	Groundwood Products
Compostable Paper Packaging	Mixed Low Grade Paper Products
R/C Paper Packaging	Compostable Paper Products
	Paper Processing Sludge
	R/C Paper Products
Plastic Packaging	Plastic Products
#1 PET Bottles	#1 PET Product
#1 PET Non-bottles	#2 HDPE Product
#2 HDPE Natural Bottles	#3 PVC Product
#2 HDPE Colored Bottles	#4 LDPE Product
#2 HDPE Jars & Tubs	#5 PP Product
#3 PVC Packaging	#6 PS Product
#4 LDPE Packaging	#7 Other Product
#5 PP Packaging	PLA/Compostable Product
#6 PS Packaging	Plastic Garbage Bags
#7 Other Packaging	Non-bag Plastic Film Products
Expanded Polystyrene Packaging	Bulky Rigid Plastic Products
PLA/Compostable Packaging	R/C Plastic Products
Plastic Merchandise Bags	
Non-industrial Plastic Packaging Film	
Industrial Plastic Packaging Film	
Flexible Plastic Packaging	
R/C Plastic Packaging	
Metal	Glass
Aluminum Beverage Cans	Clear Glass Containers
Aluminum Foil/Containers	Green Glass Containers
Other Aluminum	Brown Glass Containers
Other Non-ferrous Metal	Plate Glass
Food Cans - Tinned	Non-glass Ceramics
Food Cans - Coated	R/C Glass
White Goods	
Other Ferrous Metal	
R/C Metal	
Wood Wastes	Organics
Treated Wood	Edible Food - Vegetative
Painted Wood	Inedible Food - Vegetative
Dimensional Lumber	Edible Food - Meat, Fats, Oils
Engineered Wood	Inedible Food - Meats, Fats, Oils
Pallets & Crates	Yard & Garden Waste, Leaves & Grass
Other Untreated Wood	Yard & Garden Waste, Prunings
Wood By-Products	Animal Manure
R/C Wood	Animal Carcasses
	Crop Residues
	Fruit Waste
	R/C Organics

APPENDIX B: LIST AND DEFINITIONS OF MATERIAL TYPES

2015-2016 Washington Statewide Waste Characterization Study

Table 25: List of Material Types, continued

Material Class Material Type	Material Class Material Type
Construction Materials	Hazardous and Special Waste
Natural Wood	Pesticides
Plastic Lumber	Fertilizers
Insulation	Herbicides
Asphalt Paving	Fungicides
Concrete	HID Lamps
Drywall	Compact Fluorescent Lamps
Carpet	Fluorescent Tubes
Carpet Padding	UV/Germicidal Lamps
Soil, Rocks, Sand	Asbestos
Asphalt Roofing	Water Based Paints
Plastic Flooring	Solvent-based Glues
Ceramics & Brick	Water Based Glues
R/C Construction	Oil-based Paint
	Oil-based Clear Coatings
Consumer Products	Lacquer
Televisions - CRT	Varnish
Televisions - LCD	Urethane Coatings
Television Peripherals	Deck Coatings/Floor Paint
Computer Monitors - CRT	Field/Lawn Markings
Computer Monitors - LCD	Rust Preventive Coatings
Computers	Primers/Sealers
Computer Peripherals	Stains
Computer Printers	Water Repellants
Audio Equipment	Concrete/Masonry/Wood Waterproofers
Electronic Gaming Equipment	Solvents
Other Consumer Electronics	Caustic Cleaners
Textiles - Organic	Dry-cell Batteries - Single Use
Textiles - Synthetic, Mixed, Unknown	Dry-cell Batteries - Rechargeable
Shoes, Purses, Belts	Wet-cell Batteries
Tires & Rubber	Gasoline/Kerosene
Furniture	Motor Oil
Mattresses	Antifreeze
R/C Consumer Products	Other Vehicle Fluids
Residues	Oil Filters
Disposable Diapers	Explosives
Ash	Medical Wastes
Dust	Sharps
Fines/Sorting Residue	Pharmaceuticals/Vitamins
Sludge/Special Industrial	Other Cleaners/Chemicals
	Personal Care Products
	Other Potentially Hazardous Waste

MATERIAL TYPES ORGANIZED BY PACKAGING AND PRODUCTS MATERIAL GROUPS

Table 25 shows how each of the 156 *material types* were aggregated into the Packaging and Products analysis found in the statewide study analysis above.

APPENDIX B: LIST AND DEFINITIONS OF MATERIAL TYPES

2015-2016 Washington Statewide Waste Characterization Study

Table 26: Material Types by Packaging and Products Material Groups

Material Group Material Type	Material Group Material Type
Packaging	Products
Newspaper Packaging	Newspaper Products
Cardboard/Kraft Packaging	Cardboard/Kraft Products
Other Groundwood Packaging	Magazines
Mixed/Low Grade Packaging	High-grade Papers
Aseptic and Polycoat Packaging	Groundwood Products
Compostable Paper Packaging	Mixed Low Grade Paper Products
R/C Paper Packaging	Compostable Paper Products
#1 PET Bottles	Paper Processing Sludge
#1 PET Non-bottles	R/C Paper Products
#2 HDPE Natural Bottles	#1 PET Product
#2 HDPE Colored Bottles	#2 HDPE Product
#2 HDPE Jars & Tubs	#3 PVC Product
#3 PVC Packaging	#4 LDPE Product
#4 LDPE Packaging	#5 PP Product
#5 PP Packaging	#6 PS Product
#6 PS Packaging	#7 Other Product
#7 Other Packaging	PLA/Compostable Product
Expanded Polystyrene Packaging	Plastic Garbage Bags
PLA/Compostable Packaging	Non-bag Plastic Film Products
Plastic Merchandise Bags	Bulky Rigid Plastic Products
Non-industrial Plastic Packaging Film	R/C Plastic Products
Industrial Plastic Packaging Film	Televisions - CRT
Flexible Plastic Packaging	Televisions - LCD
R/C Plastic Packaging	Television Peripherals
Clear Glass Containers	Computer Monitors - CRT
Green Glass Containers	Computer Monitors - LCD
Brown Glass Containers	Computers
Aluminum Beverage Cans	Computer Peripherals
Aluminum Foil/Containers	Computer Printers
Food Cans - Tinned	Audio Equipment
Food Cans - Coated	Electronic Gaming Equipment
	Other Consumer Electronics
Organics	Textiles - Organic
Edible Food - Vegetative	Textiles - Synthetic, Mixed, Unknown
Inedible Food - Vegetative	Shoes, Purses, Belts
Edible Food - Meat, Fats, Oils	Tires & Rubber
Inedible Food - Meats, Fats, Oils	Furniture
Yard & Garden Waste, Leaves & Grass	Mattresses
Yard & Garden Waste, Prunings	R/C Consumer Products
Animal Manure	Plate Glass
Animal Carcasses	Non-glass Ceramics
Crop Residues	White Goods
Fruit Waste	
R/C Organics	

APPENDIX B: LIST AND DEFINITIONS OF MATERIAL TYPES

2015-2016 Washington Statewide Waste Characterization Study

Table 26: Material Types by Packaging and Products Material Groups, continued

Material Class Material Type	Material Class Material Type
Metal	Hazardous and Special Waste
Other Aluminum	Pesticides
Other Non-ferrous Metal	Fertilizers
Other Ferrous Metal	Herbicides
R/C Metal	Fungicides
	HID Lamps
Wood Wastes	Compact Fluorescent Lamps
Treated Wood	Fluorescent Tubes
Painted Wood	UV/Germicidal Lamps
Dimensional Lumber	Asbestos
Engineered Wood	Water Based Paints
Pallets & Crates	Solvent-based Glues
Other Untreated Wood	Water Based Glues
Wood By-Products	Oil-based Paint
R/C Wood	Oil-based Clear Coatings
	Lacquer
Construction Materials	Varnish
Natural Wood	Urethane Coatings
Plastic Lumber	Deck Coatings/Floor Paint
Insulation	Field/Lawn Markings
Asphalt Paving	Rust Preventive Coatings
Concrete	Primers/Sealers
Drywall	Stains
Carpet	Water Repellants
Carpet Padding	Concrete/Masonry/Wood Waterproofers
Soil, Rocks, Sand	Solvents
Asphalt Roofing	Caustic Cleaners
Plastic Flooring	Dry-cell Batteries - Single Use
Ceramics & Brick	Dry-cell Batteries - Rechargeable
R/C Construction	Wet-cell Batteries
	Gasoline/Kerosene
Residues	Motor Oil
Disposable Diapers	Antifreeze
R/C Glass	Other Vehicle Fluids
Ash	Oil Filters
Dust	Explosives
Fines/Sorting Residue	Medical Wastes
Sludge/Special Industrial	Sharps
	Pharmaceuticals/Vitamins
	Other Cleaners/Chemicals
	Personal Care Products
	Other Potentially Hazardous Waste



6. Compostable Paper Packaging: packaging paper that can be composted such as pizza boxes, waxed cardboard boxes, and all cups/containers from fast food establishments.
7. Remainder/Composite Paper Packaging: non-recyclable and non-compostable types of papers such as paper packaging with metal or plastic parts (except aseptic packaging). Examples would include plastic lined or metal handled take-out food containers.

Paper Products

8. Newspaper Products: printed groundwood newsprint, including glossy ads and Sunday edition magazines that are delivered with the newspaper (unless these are found separately during sorting).
9. Cardboard and Kraft Paper Products: unwaxed Kraft paper and corrugated products, unless poly- or foil-laminated. Could include cat scratching pads.
10. Magazines: magazines, catalogs and similar products with glossy paper. Includes Sunday edition news magazines, if found separate from the newspaper.
11. High-Grade Paper Products: high-grade white or light-colored bond and copy machine papers and envelopes, and continuous-feed computer printouts and forms of all types, except multiple copy carbonless paper.
12. Other Groundwood Paper Products: non-packing products made from groundwood paper, including phone books, some tablet paper, and paperback books.
13. Mixed/Low-Grade Paper Products: low-grade recyclable papers, including colored papers, notebook or other lined paper, envelopes with plastic windows, non-corrugated paperboard, carbonless copy paper, and junk mail.
14. Compostable Paper Products: non-packaging papers that can be composted such as paper towels/napkins, paper cups and plates (if purchased empty), and tissues.
15. Paper Processing Sludge: paper-based materials from industrial non-packaging sources that do not easily fit into the above materials, such as sludges.
16. Remainder Composite Paper Products: non-recyclable and non-compostable types of paper products such as carbon paper and hardcover books, and composite materials containing paper mixed with metal or plastic parts.

Plastic Packaging

17. #1 PETE (Polyethylene terephthalate) Plastic bottles: includes plastic bottles bearing the #1, such as carbonated drink bottles and water bottles.
18. #1 PETE (Polyethylene terephthalate) Plastic non-bottles: includes plastic non-bottle packaging bearing the #1, and would include oven-ready meal trays and other packaging.
19. #2 HDPE (High-density polyethylene) Plastic Natural Bottles: includes milk jugs and water jugs and any natural bottle bearing the #2.
20. #2 HDPE (High-density polyethylene) Plastic Colored Bottles: includes detergent bottles, some hair care product bottles, and any opaque plastic bottle bearing the #2.
21. #2 HDPE (High-density polyethylene) Plastic Jars and Tubs: yogurt and margarine tubs and any packaging jar or tub bearing the #2. This category includes 5-gallon plastic pails (with or without handles) and lids.
22. #3 PVC (Polyvinyl chloride) Plastic Packaging: includes any plastic bottle or container marked with a # 3.
23. #4 LDPE (Low-density polyethylene) Plastic Packaging: includes any plastic bottle or container marked with the #4.
24. #5 PP (Polypropylene) Plastic Packaging: includes any plastic packaging marked with the #5 as well as plastic straws.
25. #6 PS (Polystyrene) Plastic Packaging: includes any plastic packaging marked with the #6 such as compact disc cases, some plastic to-go beverage cups, and any other rigid PS packaging.
26. #7 Other/Unknown Plastic Packaging: includes all non-numbered plastic packaging and any other plastic packaging product not listed in another category.
27. Expanded Polystyrene Packaging: includes packing peanuts, Styrofoam coolers, egg cartons, meat trays, take out containers, and other Styrofoam packaging.
28. PLA (Polylactic Acid) Compostable Packaging: any compostable plastic packaging or food containers made from corn, potato, sugarcane or any other compostable resin. Examples include fast food clamshell containers and beverage cups.
29. Plastic Merchandise Bags: will include all grocery, shopping, and merchandise bags.
30. Non-industrial Packaging Film Plastic: includes other types of packaging film such as cling wrap, bread and food bags, and plastic potato chip bags.
31. Industrial Packaging Film Plastic: includes bubble wrap and shrink wrap and any other packaging film used in a typically industrial manner.
32. Flexible Plastic Packaging: means plastic pouches made of thicker, multi-layer flexible material. May have a flat bottom so that package would stand up on its own, but not always. Material is thicker than potato chip bags and frozen vegetable bags. Includes plastic coffee bags like Starbucks and Peets; Capri Sun pouches; baby food pouches – may have plastic screw top; soup pouches; salad dressing pouches; wine pouches; backpacking meals in pouches; soap refill pouches; laundry detergent pouches; and other similar items. The following table and figures include examples of flexible plastic packaging.

APPENDIX B: LIST AND DEFINITIONS OF MATERIAL TYPES

2015-2016 Washington Statewide Waste Characterization Study

INCLUDED – THICKER, MULTI-LAYER PACKAGING	EXCLUDED – THINNER, SINGLE LAYER PACKAGING
<ul style="list-style-type: none"> - Plastic coffee bags (Starbucks and Peet’s) - Juice pouches (Capri Sun) - Baby food pouches – may have plastic screw top - Soup pouches - Salad dressing pouches - Wine pouches - Backpacking meals in pouches - Soap refill pouches - Laundry detergent pouches - Other similar items 	<ul style="list-style-type: none"> - Potato chip bags and similar - Candy wrappers - Tortilla bags - Frozen food bags (vegetables, berries) - Nut/snack bags - Shrink plastic wrappers (Slim Jim and string cheese wrappers) - Ziplock bags that you buy for home use - Thin produce bags as used in grocery stores - Newspaper bags - Bread bags - Small (2 inch) pouches for condiments (mustard, relish, etc.) - Yogurt tubes (Gogurt) - Mailing pouches, usually colored or white (not clear) (LL Bean, medication pouches) - 100% Plastic mailing pouches with bubble wrap - Other similar items

APPENDIX B: LIST AND DEFINITIONS OF MATERIAL TYPES

2015-2016 Washington Statewide Waste Characterization Study

Figure 24. Example Flexible Plastic Packaging



33. Remainder/Composite Plastic Packaging: other types of packaging that are not one of the above materials and items that are composites of multiple plastics and plastics mixed with other materials. An examples of this material type is some bathroom silicone sealant tubes designed to be used with an applicator gun. These tubes frequently have plastic bodies and tips but metal end caps.

Plastic Products

34. #1 PETE (Polyethylene terephthalate) Plastic Products: includes any PET product bearing the #1 and used in a non-packaging application.
35. #2 HDPE (High-density polyethylene) Plastic Products: includes any other non-packaging product bearing the #2.
36. #3 PVC (Polyvinyl chloride) Plastic Products: includes any non-packaging product bearing the #3 but also including plastic piping, some shower curtains, and some toys.
37. #4 LDPE (Low-density polyethylene) Plastic Products: includes any other non-packaging product bearing the #4.
38. #5 PP (Polypropylene) Plastic Products: includes any plastic non-packaging product bearing the #5 but also includes some reusable food containers.
39. #6 PS (Polystyrene) Plastic Products: includes any plastic non-packaging product bearing the #6 but also includes plastic tableware.
40. #7 Other/Unknown Plastic Products: includes all non-packaging, non-numbered plastic product not listed in another category. Examples could include some toys, household products, disposable plastic products (food utensils), durable plastic products (tooth brushes, dinnerware), and electronic media (CDs and DVDs).
41. PLA (Polylactic Acid) Compostable Products: any compostable plastic product made from corn, potato, sugarcane or any other compostable resin. Examples include utensils and plates made of PLA.
42. Plastic Garbage Bags: includes all bags whose primary use is to hold trash or garbage.
43. Plastic Non-bag Film Products: includes Visqueen sheeting for drop cloths, other plastic tarps, and any other film product not used for packaging purposes.
44. Bulky Rigid Plastic Products: Large (larger than a five-gallon bucket), wholly plastic products intended to be used multiple times over a long period of time. Examples include garbage cans, some large children's toys, and plastic furniture.
45. Remainder/Composite Plastic Products: includes all other types of non-packaging plastic that are not one of the above materials and items that are composites of multiple plastics and plastics mixed with other materials. This section also includes plastic sheeting and tarps that are contaminated with other materials such as paint or concrete residue. Examples would include plastic toys with metal attachments.

Glass

46. Clear Glass Containers: bottles and jars made from clear glass.
47. Green Glass Containers: bottles and jars made from green glass.
48. Brown/Other Colored Glass Containers: bottles and jars made from brown glass. Note that blue glass was included with brown glass.
49. Plate Glass: flat glass products such as windows, mirrors, and flat products.
50. Non-glass Ceramics: Ceramics not composed of true glass and not typically used as building materials. Examples include dishes, crockware, etc.

51. Remainder/Composite Glass: other types of glass products and scrap that do not fit into the above materials, including light bulbs, glassware, Pyrex, and non-C&D fiberglass. Note that ceramics (plates and knickknacks) will not be included here but will be placed in “Non-Glass Ceramics” below.

Metal

52. Aluminum Beverage Cans: aluminum beverage cans.
53. Aluminum Foil/Containers: aluminum foil, food trays and similar items.
54. Other Aluminum: aluminum scrap and products that do not fit into the above two materials.
55. Other Non-Ferrous Metal: metallic products and pieces that are not aluminum and not derived from iron (see “other ferrous”) and are not significantly contaminated with other metals or materials (see “residual/composite”).
56. Food Cans-Tinned: including zinc or tin-coated steel food containers. This material includes bi-metal beverage cans, but not paint cans or other types of cans.
57. Food Cans-Coated: including many plastic-lined aluminum pet food containers.
58. White Goods: large household appliances or parts thereof. Special note should be taken if any of these are found still containing refrigerant.
59. Other Ferrous Metal: products and pieces made from metal to which a magnet will adhere (including stainless steel), and which are not significantly contaminated with other metals or materials (in the latter case, the item will instead be included under “residual/composite”). This material will include paint and other non-food “tin cans”, as well as aerosol cans.
60. Remainder/Composite Metals: items made of a mixture of ferrous and non-ferrous or a mixture of metal and non-metallic materials (as long as these are primarily metal). Examples include small appliances, motors, and insulated wire.

Organics

61. Edible Food Waste, Vegetative: plant-based foods including the food container when the container weight is not appreciable compared to the food inside. The food appears to be edible or appears to have been edible when discarded. Foods with small blemishes should still be considered edible, but scraps of food already removed from the edible portion, such as fruit peelings, should not be counted. This includes edible breads and candies.
62. Inedible Food Waste, Vegetative: plant-based foods including the food container when the container weight is not appreciable compared to the food inside. The food appears to be inedible or appears to have been inedible when discarded. Moldy foods or scraps of food already removed from the edible portion, such as fruit peelings, are included here. Includes coffee filters and tea bags. This includes inedible breads and candies.
63. Edible Food Waste, Meats, Fats, and Oils: animal derived foods and oils including the food container when the container weight is not appreciable compared to the food inside. The food appears to be edible or appears to have been edible when discarded. Foods with small blemishes should still be considered edible, but scraps of food already removed from the edible portion, such as bones, should not be counted.
64. Inedible Food Waste, Meats, Fats, and Oils: animal derived foods and oils including the food container when the container weight is not appreciable compared to the food inside. Moldy foods or scraps of food already removed from the edible portion, such as bones and eggshells, are included here.
65. Yard, Garden Waste (Leaves and Grass): grass clippings, leaves and weeds.
66. Yard, Garden Waste (Prunings): materials including prunings six inches or less (branches with leaves OK).

67. Animal Manure: all animal manures and soiled bedding and litter whether derived from an agricultural or residential origin. Includes kitty litter.
68. Animal Carcasses, Offal: carcasses and pieces of small and large animal, unless the item is the result of food preparation in a household or commercial setting. For instance, fish or chicken entrails from food preparation and raw, plucked chickens will typically be classified as food, not as an animal carcass, unless the material is from an agricultural or industrial source.
69. Crop Residues: vegetative materials that are left over from growing crops (except tree fruit) and that are treated as a waste (specify type of crop).
70. Fruit Waste: Fruit (apples, berries, grapes, etc.) and processing wastes (apple, grape, berry pomace, etc.) that are left over from growing and processing fruit in Washington and that are treated as a waste (specify type of fruit). Does not include fruit purchased as groceries but does include fruit grown in a home garden.
71. Remainder/Composite Organics: other organics that do not easily fit into the above materials must note identity of whatever material is placed in this category.

Wood Debris

72. Treated Wood: wood treated with preservatives such as creosote, CCA and ACQ. This includes dimensional lumber and posts if treated, but does not include painted or varnished wood. This material may also include some plywood (especially “marine plywood”), strandboard, and other wood.
73. Painted Wood: wood that has been painted, varnished or coated in similar ways.
74. Dimensional Lumber: wood commonly used in construction for framing and related uses, including 2 x 4’s, 2 x 6’s and posts/headers (4x8’s, etc.).
75. Engineered Wood: building materials that have been manufactured and that generally include adhesive as one or more layers. Examples include plywood (sheets of wood built up of two or more veneer sheets glued or cemented together under pressure), particle board (wood chips pressed together to form large sheets or boards), fiberboard (like particle board but with fibers), “glu-lam” beams and boards (built up from dimensional or smaller lumber), and similar products.
76. Pallets and Crates: partial or whole wood pallets, crates and similar shipping containers.
77. Other Untreated Wood: other types of wood products and materials that do not fit into the above materials, excluding composite materials (See Residual/Composites, below).
78. Wood By-products: sawdust and shavings, not otherwise identifiable.
79. Remainder/Composite Wood Debris: items that consist primarily of wood but that do not fit into the above materials, including composite materials that consist primarily (over 50 percent) of wood. Examples of composites include wood with sheetrock nailed to it or with tiles glued to it (such that the materials cannot be easily separated).

Construction Materials

80. Natural Wood: wood that has not been processed, including stumps of trees and shrubs, with the adhering soil (if any), and other natural woods, such as logs and branches in excess of six inches in diameter.
81. Plastic lumber: Dimensional or sheet lumber made from plastic and resin composites. Includes plastic pallets
82. Insulation: Include all pad, roll, or blown-in types of insulation.
83. Asphalt Paving: asphalt paving material.
84. Concrete: cement (mixed or unmixed), concrete blocks, and similar wastes.

85. Drywall: used or new gypsum wallboard, sheetrock or drywall present in recoverable amounts or pieces (generally any piece larger than two inches square will be recovered from the sample).
86. Carpet: pieces of carpet and rugs made of similar material.
87. Carpet Padding: foam rubber and other materials used as padding under carpets.
88. Soil, Rocks and Sand: rock, gravel, soil, sand and similar naturally-occurring materials.
89. Asphalt Roofing: asphalt and fiberglass shingles, tar paper, and similar wastes from demolition or installation of roofs. Does not include wooden shingle or shakes.
90. Plastic Floor Covering: such as plastic tile, vinyl flooring, and linoleum.
91. Ceramics and Bricks: includes clay, porcelain bricks and tiles, such as used toilets, sinks and bricks of various types and sizes.
92. Remainder/Composite Construction Materials: other construction and demolition materials that do not fit easily into the above materials or that are composites made up of two or more different materials.

Consumer Products

93. Televisions-CRT: television sets containing a cathode ray tube (CRT).
94. Televisions-LCD: LCD or plasma.
95. Television Peripherals: DVRs, VCRs, DVD players, etc.
96. Computer Monitors-CRT: computer monitors containing a cathode ray tube (CRT).
97. Computer monitors-LCD: LCD computer monitors.
98. Computers: towers, laptops and portable computers
99. Computer Peripherals: keyboard, mice and mouse pads, disk drives, etc.
100. Computer Printers: all types of computer printers including printers combined with scanners, fax machines, or other peripherals
101. Audio Equipment: examples include stereo equipment, receivers, speakers, radios, tape players, CD players, turntables, etc.
102. Electronic Gaming equipment: such as Nintendo, Play Stations, joysticks, etc.
103. Other Consumer Electronics: small electric appliances such as toasters, mixers, microwave ovens, power tools, curling irons, cell phones, and anything else that runs with a plug or battery.
104. Textiles-Organic: cloth, clothing, and rope made of 100 percent cotton, leather, wool or other naturally-occurring fibers. Composites of several different naturally-occurring fibers (such as a wool jacket with a cotton liner) can be included in this material, as can organic textiles with buttons and zippers.
105. Textiles-Synthetic, Mixed or Unknown: cloth, clothing, and rope made of unknown fibers, synthetic fibers or made from a mixture of synthetic and natural materials.
106. Shoes, Purses, and Belts: all shoes and boots, purses, and belts whether made of leather, rubber, other materials, or a combination thereof.
107. Tires and Other Rubber: vehicle tires of all types, including bicycle tires and including the rims if present, and finished products and scrap materials made of rubber, such as bath mats, inner tubes, rubber hose and foam rubber (except carpet padding, see below).
108. Furniture: mixed-material furniture such as upholstered chairs (furniture made of a single material would be classified with that material category).
109. Mattresses: mattresses made of various materials and in any condition.
110. Remainder/Composite Consumer Products: this is a catch-all material for objects consisting of more than one material.

Hazardous and Special Wastes

- 111. Pesticides: includes a variety of chemical compounds whose purpose is to discourage or kill pests and microorganisms. Multipurpose agricultural compounds (Three-in-one pesticides/herbicide/fungicides, for example) are included in this category.
- 112. Fertilizers: includes a variety of chemical compounds intended to promote the growth of the desired animal crop. This does not include compost.
- 113. Herbicides: includes a variety of chemical compounds whose purpose is to discourage or kill plants.
- 114. Fungicides: includes a variety of chemical compounds whose purpose is to discourage or kill fungi.
- 115. High-Intensity Discharge Lamps (HID): includes high pressure sodium, metal halide and mercury vapor.
- 116. Compact Fluorescent Lamps (CFL)
- 117. Fluorescent Tubes: includes linear, u-shaped, and circular.
- 118. UV and Germicidal Lamps: includes lamps of all shapes and sizes (pin type or screw in) intended to inhibit bacterial or viral growth. If the type of lamp can't be determined it will be included in the most appropriate category based on information available to the sort crew.



LightRecycle Washington - Accepted and Not-Accepted Products List

The program includes all mercury-containing lights including:

Accepted Products	
Fluorescent Tubes - Straight/Linear	Includes all diameters and light outputs in a straight/linear configuration. Can range in size from under 2 feet in length to 8 feet in length.
Fluorescent Tubes - Curved/Circular	Includes all diameters and light outputs in a curved/circular configuration (curved, square, U, etc.).
UV and Germicidal Lamps	UV or germicidal lamps of all shapes and sizes. All base types including pin-type, screw-in, etc.

APPENDIX B: LIST AND DEFINITIONS OF MATERIAL TYPES

2015-2016 Washington Statewide Waste Characterization Study



Accepted Products
Compact Fluorescent Lamps (CFLs) Fluorescent bulbs that are typically similar in size and intended to replace an incandescent (traditional) light bulb.
High Intensity Discharge (HID) and Other Includes these HID types: high pressure sodium, mercury vapour and metal halide. These lamps vary in size but are much larger than a typical bulb. In some cases, they can be as big, or bigger, than a football.

Pictures are shown as illustrative examples only and should not be considered an endorsement of any brand or supplier

119. Asbestos: pure asbestos and asbestos-containing products where the asbestos present is the most distinguishing characteristic of the material.
120. Water Based Paints: includes latex and other water-based paints and similar products.
121. Solvent-Based Adhesives/Glues: oil/resin/volatile solvent-based glues and adhesives, including epoxy, rubber cement, two-part glues and sealers, and auto body fillers.
122. Water-Based Adhesives/Glues: water-based glues, caulking compounds, grouts, and Spackle.
123. Oil-Based Paint: includes alkyd and enamel paints. Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will sorted based on the field crew's best judgement.
124. Oil Based Clear Coatings: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will sorted based on the field crew's best judgement.
125. Lacquer: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will sorted based on the field crew's best judgement.
126. Varnish: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will sorted based on the field crew's best judgement.
127. Urethane Coatings: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will sorted based on the field crew's best judgement.
128. Deck Coatings and Floor Paint: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will sorted based on the field crew's best judgement.

129. Field and Lawn Markings: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will be sorted based on the field crew's best judgement.
130. Rust Preventative Coatings: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will be sorted based on the field crew's best judgement.
131. Primers, Sealers, Undercoats: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will be sorted based on the field crew's best judgement.
132. Stains: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will be sorted based on the field crew's best judgement.
133. Water Repellants: This does not include tar or bitumen based repellants. Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will be sorted based on the field crew's best judgement.
134. Concrete, Masonry, and Wood Waterproofers: Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will be sorted based on the field crew's best judgement.
135. Solvents: includes chlorinated and flammable solvents, paint strippers, solvents contaminated with other products such as paints, degreasers and some other cleaners if the primary ingredient is (or was) a solvent, or alcohol such as methanol and isopropanol. Multipurpose products (like primer/rust inhibitor combinations) will be sorted according to the purpose listed first on the product label. Products with an indeterminate purpose will be sorted based on the field crew's best judgement.
136. Caustic Cleaners: caustic acids and bases whose primary purpose is to clean surfaces, unclog drains, or perform other actions.
137. Dry-Cell Batteries, Single Use: dry-cell batteries of various sizes and types as commonly used in households. These are not intended to be recharged. Includes cell phone and button cell batteries. Batteries are not removed from items containing batteries.
138. Dry-Cell Batteries, Rechargeable: dry-cell batteries of various sizes and types as commonly used in households. These are intended to be recharged and used many times. Includes cell phone and button cell batteries. Batteries are not removed from items containing batteries.
139. Wet-Cell Batteries: wet-cell batteries of various sizes and types as commonly used in automobiles.
140. Gasoline/Kerosene: gasoline, diesel fuel, and fuel oils.
141. Motor Oil: lubricating oils, primarily used in vehicles but including other types with similar characteristics.
142. Antifreeze: automobile and other antifreeze mixtures based on ethylene or propylene glycol.
143. Other Vehicle Fluids: includes brake, power steering, and hydraulic, and transmission fluid.
144. Oil Filters: used oil filters, primarily those used in cars but possibly including similar filters from other types of vehicles and other applications.
145. Explosives: gunpowder, unspent ammunition, picric acid, and other potentially explosive chemicals.
146. Medical Wastes: materials typically discarded in a health care setting such as I.V. tubing and patient drapes, specimen containers, and Petri dishes. Medical wastes that could be considered a biohazard are weighed, but not further sorted.
147. Sharps: Needles, syringes, and diabetic testing strips with a finger prick.

148. Pharmaceuticals and Vitamins: not including the container (classify the container according to the material type). Examples include solid, liquid, cream, and gel medicines, inhalers, Neosporin, rubbing alcohol, Betadine, etc.
149. Other Cleaners/Chemicals: non-caustic cleaners and other household chemicals such as Windex, toilet bowl cleaner, carpet shampoo, etc.
150. Personal Care Products: soaps, cosmetics, shampoo's, nail polish, nail polish remover and other items.
151. Other Potentially Hazardous Wastes: other chemicals or potentially harmful wastes that do not fit into the above categories, including unidentifiable materials and problem wastes that do not fall into one of the above materials. Includes cigarette lighters.

Residuals

152. Disposable Diapers: disposable baby diapers and protective undergarments for adults (including feminine hygiene products).
153. Ash: fireplace, burn barrel or firepit ash, as well as boiler and ash from industrial sources.
154. Dust: baghouse and other dusts from industrial sources, as well as bags of vacuum cleaner dust.
155. Fines/Sorting Residues: mixed waste that remains on the sorting table after all the materials that can practicably be removed have been sorted out. This material will consist primarily of small pieces of various types of paper and plastic, but will also contain small pieces of broken glass and other materials. May also include material less than one-half inch in diameter that falls through a bottom screen during sorting, for those using sorting boxes with screens, and if the material cannot otherwise be identified.
156. Sludges and Other Special Industrial Wastes: sludges and other wastes from industrial sources that cannot easily be fit into any of the above materials. Can include liquids and semi-solids but only if these materials are treated as a solid waste.

Appendix C: Forms Used During the Study

List of Forms Used

- Vehicle Selection Form
- Sample Placard
- Sample Sorting & Characterization Form
- Vehicle Survey Form

Figure 25: Vehicle Selection Sheet

Washington Statewide Waste Characterization
Vehicle Selection Form

Site: Port Angeles

Date: Monday, May 16, 2016

Cross off one number for each type of vehicle entering the station.

When you reach the number circled, this vehicle should be asked to go to the sorting area to dump its load for sampling.

Continue for each block, beginning at #1, on the next line until the required number of vehicles is sampled.

FRANCHISED RESIDENTIAL: NEED 3 TOTAL - SAMPLE EVERY VEHICLE

- 1
- 1
- 1

waste hauled by contracted or municipally operated vehicles in which 80 percent or more of the waste is from single-family and/or multifamily residential sources.

FRANCHISED NON-RESIDENTIAL NEED 6 TOTAL - SAMPLE EVERY VEHICLE

- 1
- 1
- 1
- 1
- 1
- 1

waste hauled by contracted or municipally operated vehicles in which 80 percent or more of the waste is from institutional, commercial, or industrial sources. This includes loads of municipal solid waste (MSW) as well as construction and demolition (C&D) materials.

SELF-HAUL C&D NEED 3 TOTAL - SAMPLE EVERY 10TH VEHICLE

- 1 2 3 4 5 6 7 8 9 10
- 1 2 3 4 5 6 7 8 9 10
- 1 2 3 4 5 6 7 8 9 10

defined as waste hauled by vehicles not contracted or municipally operated and generated as a result of construction or demolition activities.

SELF-HAUL NON-C&D NEED 4 TOTAL - SAMPLE EVERY 10TH VEHICLE

- 1 2 3 4 5 6 7 8 9 10
- 1 2 3 4 5 6 7 8 9 10
- 1 2 3 4 5 6 7 8 9 10
- 1 2 3 4 5 6 7 8 9 10

waste hauled by vehicles not operated by a contracted or municipal hauler and not generated as a result of construction or demolition activities.

Figure 26: Sample Placard

Cell Number: 14

PORT ANGELES

RES-1

5/16/2016

Figure 28: Sample Sorting and Characterization Form, Back

2015 Washington DOE Waste Composition Study

Talley Sheet - Page 2 of 2

Hazardous and Special Waste						
Pesticides						
Fertilizers						
Herbicides						
Fungicides						
HID Lamps						
Compact Fluorescents						
Fluorescent Tubes						
UV/Germicidal Lamps						
Asbestos						
Water Based Paints						
Solvent-based Glues						
Water Based Glues						
Oil-based Paint						
Oil-based Clear Coatings						
Lacquer						
Varnish						
Urethane Coatings						
Deck Coatings/Floor Paint						
Field/Lawn Markings						
Rust Preventive Coatings						
Primers/Sealers						
Stains						
Water Repellants						
Concrete/Masonry/Wood Waterproofers						
Solvents						
Caustic Cleaners						
Dry-cell Batteries-Single Use						
Dry-cell Batteries-Rechargeable						
Wet-cell Batteries						
Gasoline/Kerosene						
Motor Oil						
Antifreeze						
Other Vehicle Fluids						
Oil Filters						
Explosives						
Medical Wastes						
Sharps						
Pharmaceuticals/Vitamins						
Other Cleaners/Chemicals						
Personal Care Products						
Other Potentially Hazardous						

Wood Wastes						
Treated Wood						
Painted Wood						
Dimensional Lumber						
Engineered Wood						
Pallets & Crates						
Other Untreated Wood						
Wood By-Products						
R/C Wood						
Natural Wood						
Plastic Lumber						
Insulation						
Asphalt Paving						
Concrete						
Drywall						
Carpet						
Carpet Padding						
Soil, Rocks, Sand						
Asphalt Roofing						
Plastic Flooring						
Ceramics & Brick						
R/C Construction						

Construction Materials						
Televisions - CRT						
Televisions - LCD						
VCR's, DVD's, DVR's						
Computer Monitors - CRT						
Computer Monitors - LCD						
Computers						
Computer Peripherals						
Computer Printers						
Audio Equipment						
Gaming Equipment						
Other Consumer Electronics						
Textiles - Organic						
Textiles - Synthetic						
Shoes, Purses, Belts						
Tires & Rubber						
Furniture						
Mattresses						
R/C Consumer						

Consumer Products						
Disposable Diapers						
Ash						
Dust						
Fines/Sorting Residue						
Sludge/Special Industrial						

Figure 30: Vehicle Survey Form, Back

GENERAL INSTRUCTIONS

Make entries neatly in pencil.
Enter the information at the top of each page. Enter total # of pages on each page at the end of the day.
Enter the net weight of the load. If the operator measures self-haul loads by volume, record the volume and indicate that the unit is "yds".
If the load is either SH or SHC note whether it is from a residence or a business.
If the load is from a construction site, circle only one of the activities in the For SHC what kind of construction job? column.
If load is from a single source note the generator type. Get the name too if possible

STEP-BY-STEP INSTRUCTIONS

CHECK IN WITH GATEHOUSE STAFF
Confirm the method for getting net weights.

AS THE VEHICLE ARRIVES RECORD THE TYPE OF VEHICLE ON THE SURVEY SHEET

WHEN A VEHICLE ARRIVES, STOP THE VEHICLE, THEN BEGIN QUESTIONS:
ALL DRIVERS:
Introduction: "Hello, the Washington DOE is conducting a survey today."
Ask the driver what **sector** generated the load
If you circle more than one sector, be sure to ask the driver for the estimated % of each.

Commercially collected residential: Single-family (SF)	Waste that is collected by a commercial hauler from single-family residences or multifamily structures with less than 4 units
Commercially collected residential: Multifamily (MF)	Waste that is collected by a commercial hauler from multi-unit structures with greater than 4 units
Commercially collected commercial (COM)	Waste disposed by businesses, industries (factories, farms, etc.), and governments (schools, highways, parks, etc.) that is collected and transported by professional waste haulers
Self-hauled	Waste hauled to a disposal site by a resident or business that is from a construction job
Self-hauled construction	Waste hauled to a disposal site by a resident or business that is not from a construction job

IF THE SOURCE IS COM AND THE VEHICLE TYPE IS DB-LOOSE OR DB-COMPACTED, ASK
Is this load from a single source (a single business generated the garbage in this load)
If yes, circle Y in the single source column
Ask what type of business and note the generator type that best matches in the generator type column
If possible get the business name and note it

IF THE SOURCE IS SH OR SHC, ASK
Is the load from a residence or someplace else (business, government office, manufacturing, public works facility)
If it's a residence circle R, if it's not circle NR

IF DRIVER IS FROM A CONSTRUCTION SITE, ASK:
If it is a C&D load, ask the driver what **activity** generated the waste.

New construction (NC)	Construction materials generated from the construction of new buildings
Remodel (R)	Construction or demolition materials generated from the remodeling of buildings
Demolition (D)	Materials generated from the tearing down of any facility, structure, pavement or building, (wall, fence) whether in whole or in part, whether interior or exterior
Roofing (RF)	Waste generated by the installation or replacement of roofs
Other construction & demolition (OC)	Waste generated by construction or demolition of buildings, not included in categories above or from public works projects.

RECORD NET WEIGHTS
Circle the units used, if the same units are used all day just circle the units on the first row. If not circle the units on every row.
If the site has a minimum weight note it on the front page and every time a survey vehicle pays the minimum check it in the appropriate column.

Appendix D: Waste Generation Area Composition Results

This section presents waste composition results for each of Washington's six WGAs:

- Central
- East
- Northwest
- Puget Sound
- Southwest
- West

Each WGA section presents composition tables for the following sectors:

- Overall
- Commercial
- Residential
- Self-hauled C&D
- Self-hauled Other

In addition to the sector tables, a set of six figures, one for each WGA, is presented. All WGAs were analyzed using the 2015-2016 statewide study (156 material type list) format. Figure 31 through Figure 36 show a comparison of each WGAs overall waste composition at the material class level.

Table 27 through Table 56 present detailed composition tables for each of the six WGAs for the overall waste stream and for each of the four sectors analyzed.

APPENDIX D: WASTE GENERATION AREA COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Figure 31: Central WGA

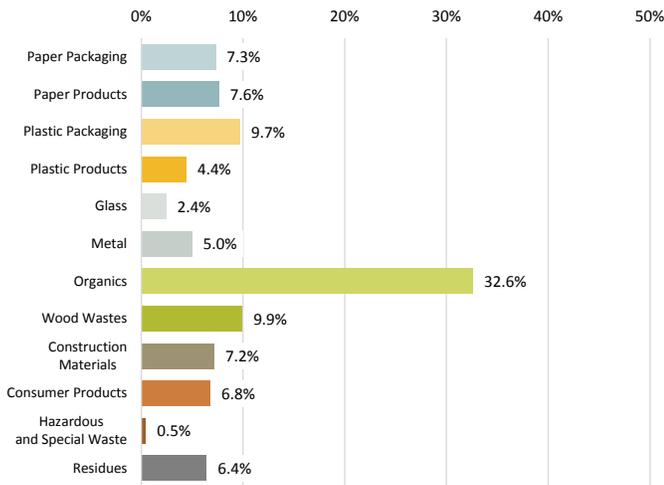


Figure 32: East WGA

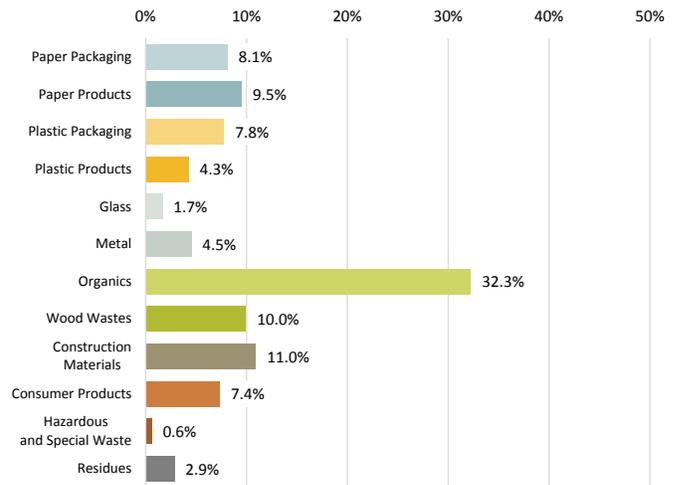


Figure 33: Northwest WGA

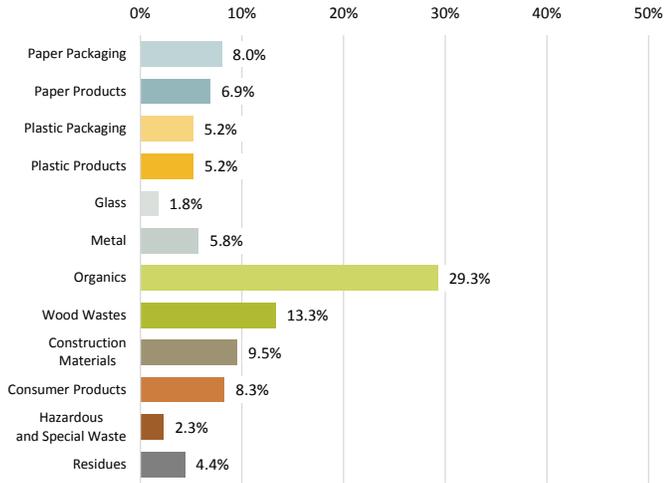
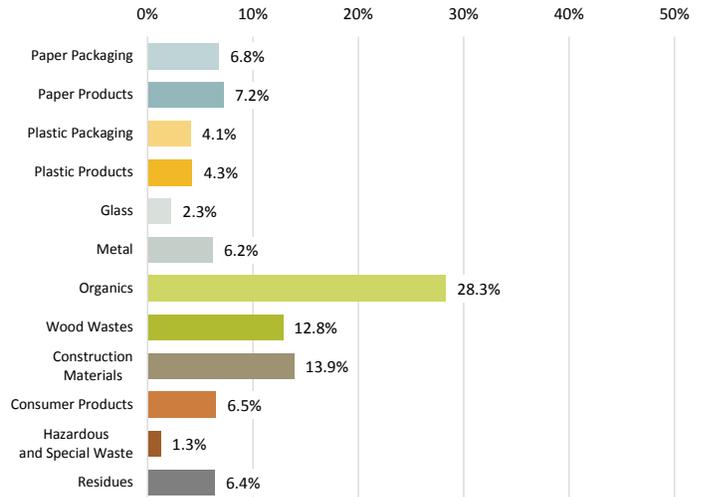


Figure 34: Puget Sound WGA



APPENDIX D: WASTE GENERATION AREA COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Figure 35: Southwest WGA

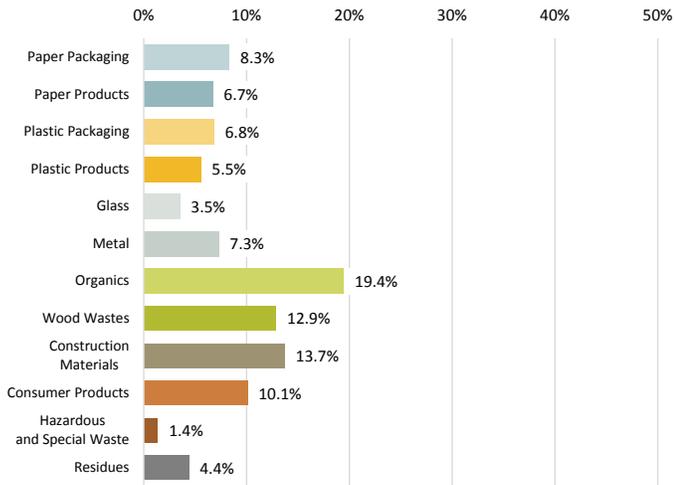
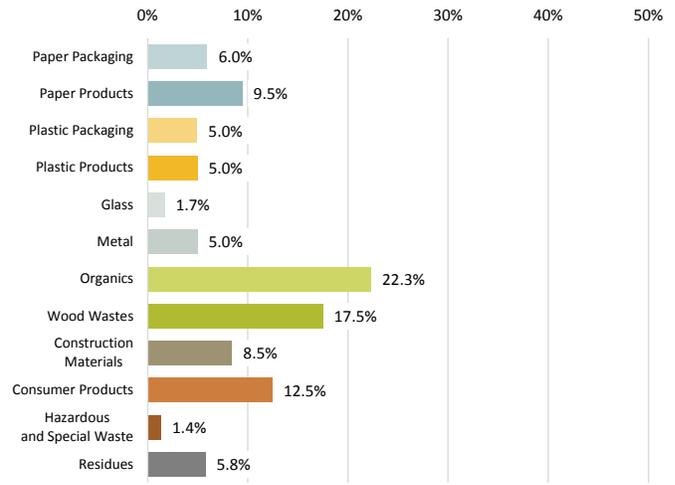


Figure 36: West WGA





Central Waste Generation Area Composition Tables

Table 27: Central WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	7.3%		37,984	Paper Products	7.6%		39,584
Newspaper Packaging	0.1%	0.1%	320	Newspaper	0.5%	0.2%	2,369
Cardboard/Kraft Paper Packaging	3.9%	0.9%	20,063	Cardboard/Kraft Paper Products	0.0%	0.0%	19
Other Groundwood Paper Packaging	0.4%	0.5%	2,133	Magazines	0.3%	0.1%	1,297
Mixed/Low Grade Paper Packaging	1.8%	0.4%	9,243	High-Grade Paper Products	2.0%	1.8%	10,341
Aseptic and Polycoat Packaging	0.1%	0.0%	620	Other Groundwood Paper Products	0.0%	0.0%	24
Compostable Paper Packaging	0.5%	0.1%	2,499	Mixed Low Grade Paper Products	1.1%	0.5%	5,944
R/C Paper Packaging	0.6%	0.2%	3,106	Compostable Paper Products	3.0%	0.6%	15,624
Plastic Packaging	9.7%		50,379	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	1.8%	1.1%	9,169	R/C Paper Products	0.8%	0.8%	3,966
#1 PETE Plastic Non-bottles	0.7%	0.3%	3,517	Plastic Products	4.4%		22,991
#2 HDPE Plastic Natural Bottles	0.7%	0.3%	3,673	#1 PETE Plastic Products	0.0%	0.0%	92
#2 HDPE Plastic Colored Bottles	0.4%	0.1%	2,053	#2 HDPE Plastic Products	0.0%	0.0%	34
#2 HDPE Plastic Jars & Tubs	0.3%	0.2%	1,563	#3 PVC Plastic Products	0.0%	0.0%	36
#3 PVC Plastic Packaging	0.0%	0.0%	10	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	6	#5 PP Plastic Products	0.0%	0.0%	109
#5 PP Plastic Packaging	0.4%	0.1%	1,929	#6 PS Plastic Products	0.1%	0.1%	568
#6 PS Plastic Packaging	0.0%	0.0%	68	#7 Other Plastic Products	0.6%	0.3%	3,219
#7 Other Plastic Packaging	0.2%	0.1%	984	PLA/Compostable Plastic Products	0.0%	0.0%	14
Expanded Polystyrene Packaging	0.7%	0.4%	3,593	Plastic Garbage Bags	1.0%	0.2%	5,136
PLA/Compostable Plastic Packaging	0.0%	0.0%	70	Non-bag Plastic Film Products	0.2%	0.2%	982
Plastic Merchandise Bags	0.5%	0.1%	2,518	Bulky Rigid Plastic Products	1.4%	0.8%	7,061
Non-industrial Packaging Film Plastic	2.0%	0.9%	10,295	R/C Plastic Products	1.1%	1.1%	5,739
Industrial Packaging Film Plastic	1.8%	1.4%	9,241	Consumer Products	6.8%		35,175
Flexible Plastic Packaging	0.1%	0.1%	453	Televisions - CRT	0.1%	0.2%	579
R/C Plastic Packaging	0.2%	0.1%	1,236	Televisions - LCD	0.0%	0.0%	0
Metal	5.0%		25,889	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.5%	0.1%	2,596	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.1%	687	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.2%	0.2%	836	Computers	0.0%	0.0%	42
Other Nonferrous	0.1%	0.0%	261	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.8%	0.2%	4,101	Computer Printers	0.1%	0.2%	694
Food Cans - Coated	0.0%	0.0%	114	Audio Equipment	0.0%	0.1%	243
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	55
Other Ferrous Metal	2.0%	0.8%	10,476	Other Consumer Electronics	0.4%	0.4%	2,135
R/C Metals	1.3%	0.7%	6,817	Textiles - Organic	1.9%	0.8%	9,800
Glass	2.4%		12,679	Textiles - Synthetic, Mixed, Unknown	0.6%	0.3%	2,921
Clear Glass Containers	1.1%	0.3%	5,783	Shoes, Purses, Belts	0.6%	0.3%	2,917
Green Glass Containers	0.4%	0.2%	1,958	Tires & Rubber	1.0%	0.9%	5,365
Brown Glass Containers	0.6%	0.2%	3,142	Furniture	1.4%	0.8%	7,144
Plate Glass	0.0%	0.0%	170	Mattresses	0.6%	0.7%	3,280
Stoneware/Kitchen Ceramics	0.0%	0.0%	31	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.2%	1,596	Hazardous and Special Waste	0.5%		2,397
Organics	32.6%		168,970	Pesticides	0.0%	0.0%	59
Edible Food - Vegetative	5.9%	1.9%	30,515	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	8.5%	1.8%	44,093	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.4%	0.9%	7,175	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.6%	1.1%	13,281	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	6.8%	2.5%	35,326	Compact Fluorescent Lamps	0.0%	0.0%	5
Yard & Garden Waste - Prunings	4.1%	2.0%	21,163	Fluorescent Tubes	0.0%	0.0%	6
Animal Manure	1.7%	0.7%	8,881	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	85	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.1%	0.1%	451
Fruit Waste	1.3%	1.5%	6,611	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.4%	0.2%	1,840	Water Based Glues	0.0%	0.0%	0
Wood Wastes	9.9%		51,524	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.5%	0.4%	2,494	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	2.1%	1.3%	10,878	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.8%	1.3%	14,499	Varnish	0.0%	0.0%	0
Engineered Wood	1.4%	0.7%	7,029	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.5%	1.1%	8,030	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.7%	0.6%	3,676	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.2%	0.1%	930	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.8%	0.6%	3,987	Primers/Sealers	0.0%	0.0%	18
Construction Materials	7.2%		37,225	Stains	0.0%	0.0%	0
Natural Wood	0.1%	0.2%	710	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.4%	0.4%	2,013	Solvents	0.0%	0.0%	36
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	67
Concrete	0.6%	0.5%	3,320	Dry-cell Batteries - Single Use	0.0%	0.0%	51
Drywall	1.4%	1.0%	7,370	Dry-cell Batteries - Rechargeable	0.0%	0.0%	4
Carpet	0.8%	0.4%	4,045	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.7%	0.6%	3,617	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.6%	0.4%	3,028	Motor Oil	0.0%	0.0%	29
Asphalt Roofing	0.7%	0.7%	3,827	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	103	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.3%	0.2%	1,373	Oil Filters	0.0%	0.0%	80
R/C Construction Materials	1.5%	0.7%	7,820	Explosives	0.0%	0.0%	0
Residues	6.4%		33,325	Medical Wastes	0.3%	0.4%	1,346
Disposable Diapers	3.2%	0.9%	16,622	Sharps	0.0%	0.0%	4
Ash	0.2%	0.3%	1,068	Pharmaceuticals/Vitamins	0.0%	0.0%	9
Dust	0.0%	0.0%	13	Other Cleaners/Chemicals	0.0%	0.0%	62
Fines	1.5%	1.4%	7,631	Personal Care Products	0.0%	0.0%	90
Sludge/Special Industrial	1.5%	1.5%	7,991	Other Potentially Hazardous Waste	0.0%	0.0%	80
Sample Count	115			Totals	100%		518,121

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

Table 28: Central WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	9.9%		17,797	Paper Products	5.6%		10,091
Newspaper Packaging	0.0%	0.1%	89	Newspaper	0.1%	0.1%	260
Cardboard/Kraft Paper Packaging	6.6%	2.4%	11,995	Cardboard/Kraft Paper Products	0.0%	0.0%	19
Other Groundwood Paper Packaging	0.9%	1.3%	1,642	Magazines	0.1%	0.1%	231
Mixed/Low Grade Paper Packaging	1.4%	0.6%	2,450	High-Grade Paper Products	0.6%	0.4%	1,146
Aseptic and Polycoat Packaging	0.1%	0.1%	212	Other Groundwood Paper Products	0.0%	0.0%	2
Compostable Paper Packaging	0.3%	0.2%	544	Mixed Low Grade Paper Products	0.4%	0.2%	636
R/C Paper Packaging	0.5%	0.3%	864	Compostable Paper Products	2.5%	0.9%	4,439
Plastic Packaging	14.0%		25,229	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	1.4%	0.7%	2,616	R/C Paper Products	1.9%	2.3%	3,358
#1 PETE Plastic Non-bottles	0.8%	0.6%	1,503	Plastic Products	4.1%		7,403
#2 HDPE Plastic Natural Bottles	1.3%	0.9%	2,332	#1 PETE Plastic Products	0.0%	0.0%	28
#2 HDPE Plastic Colored Bottles	0.4%	0.3%	668	#2 HDPE Plastic Products	0.0%	0.0%	8
#2 HDPE Plastic Jars & Tubs	0.5%	0.5%	972	#3 PVC Plastic Products	0.0%	0.0%	36
#3 PVC Plastic Packaging	0.0%	0.0%	9	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	2	#5 PP Plastic Products	0.1%	0.1%	100
#5 PP Plastic Packaging	0.3%	0.1%	544	#6 PS Plastic Products	0.1%	0.1%	216
#6 PS Plastic Packaging	0.0%	0.0%	19	#7 Other Plastic Products	0.3%	0.2%	518
#7 Other Plastic Packaging	0.1%	0.1%	148	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.7%	0.5%	1,224	Plastic Garbage Bags	0.9%	0.3%	1,597
PLA/Compostable Plastic Packaging	0.0%	0.0%	34	Non-bag Plastic Film Products	0.2%	0.3%	329
Plastic Merchandise Bags	0.2%	0.1%	399	Bulky Rigid Plastic Products	0.1%	0.1%	240
Non-industrial Packaging Film Plastic	2.7%	2.3%	4,939	R/C Plastic Products	2.4%	3.2%	4,331
Industrial Packaging Film Plastic	4.8%	4.0%	8,675	Consumer Products	4.8%		8,665
Flexible Plastic Packaging	0.1%	0.1%	182	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.5%	0.4%	962	Televisions - LCD	0.0%	0.0%	0
Metal	5.9%		10,713	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.5%	0.2%	816	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	141	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.4%	0.6%	721	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	9	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.8%	0.5%	1,427	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	16	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.5%	1.4%	4,563	Other Consumer Electronics	0.3%	0.5%	571
R/C Metals	1.7%	1.8%	3,019	Textiles - Organic	1.9%	2.1%	3,350
Glass	2.0%		3,625	Textiles - Synthetic, Mixed, Unknown	0.5%	0.7%	930
Clear Glass Containers	0.9%	0.6%	1,589	Shoes, Purses, Belts	0.1%	0.1%	176
Green Glass Containers	0.2%	0.1%	290	Tires & Rubber	0.4%	0.5%	777
Brown Glass Containers	0.7%	0.5%	1,341	Furniture	0.5%	0.8%	838
Plate Glass	0.0%	0.0%	0	Mattresses	1.1%	1.8%	2,024
Stoneware/Kitchen Ceramics	0.0%	0.0%	9	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.2%	0.2%	395	Hazardous and Special Waste	0.9%		1,671
Organics	17.3%		31,308	Pesticides	0.0%	0.1%	59
Edible Food - Vegetative	4.8%	4.2%	8,732	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	3.6%	1.7%	6,451	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.1%	0.1%	236	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.2%	1.5%	2,221	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	1.8%	1.5%	3,267	Compact Fluorescent Lamps	0.0%	0.0%	3
Yard & Garden Waste - Prunings	1.2%	1.1%	2,171	Fluorescent Tubes	0.0%	0.0%	6
Animal Manure	0.7%	0.7%	1,190	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.1%	69	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.2%	0.3%	313
Fruit Waste	3.7%	4.3%	6,611	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.2%	0.2%	360	Water Based Glues	0.0%	0.0%	0
Wood Wastes	16.7%		30,090	Oil-based Paint	0.0%	0.0%	0
Treated Wood	1.0%	1.1%	1,892	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	3.5%	3.5%	6,246	Lacquer	0.0%	0.0%	0
Dimensional Lumber	5.2%	3.3%	9,362	Varnish	0.0%	0.0%	0
Engineered Wood	1.8%	1.6%	3,208	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	3.4%	2.8%	6,073	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.0%	0.0%	25	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	73	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.8%	1.6%	3,210	Primers/Sealers	0.0%	0.0%	0
Construction Materials	8.2%		14,897	Stains	0.0%	0.0%	0
Natural Wood	0.2%	0.4%	444	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	0
Insulation	1.1%	1.2%	1,901	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	1.0%	1.3%	1,851	Dry-cell Batteries - Single Use	0.0%	0.0%	31
Drywall	1.3%	1.6%	2,369	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.5%	0.6%	866	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	1.1%	1.3%	2,024	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.9%	0.8%	1,673	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.1%	75	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	28	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.5%	0.5%	956	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	1.5%	1.4%	2,709	Explosives	0.0%	0.0%	0
Residues	10.6%		19,147	Medical Wastes	0.7%	1.1%	1,252
Disposable Diapers	1.4%	1.0%	2,486	Sharps	0.0%	0.0%	2
Ash	0.6%	1.0%	1,068	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	4.2%	4.1%	7,602	Personal Care Products	0.0%	0.0%	3
Sludge/Special Industrial	4.4%	4.2%	7,991	Other Potentially Hazardous Waste	0.0%	0.0%	1
Sample Count	49			Totals	100%		180,636

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

Table 29: Central WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	6.6%		17,408	Paper Products	10.8%		28,329
Newspaper Packaging	0.1%	0.1%	169	Newspaper	0.7%	0.3%	1,952
Cardboard/Kraft Paper Packaging	2.5%	0.8%	6,421	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.2%	0.1%	480	Magazines	0.3%	0.2%	827
Mixed/Low Grade Paper Packaging	2.4%	0.8%	6,385	High-Grade Paper Products	3.4%	3.6%	9,000
Aseptic and Polycoat Packaging	0.1%	0.1%	387	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.7%	0.3%	1,890	Mixed Low Grade Paper Products	1.9%	1.0%	4,989
R/C Paper Packaging	0.6%	0.2%	1,676	Compostable Paper Products	4.2%	1.1%	10,970
Plastic Packaging	9.2%		24,084	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	2.5%	2.1%	6,487	R/C Paper Products	0.2%	0.1%	591
#1 PETE Plastic Non-bottles	0.8%	0.2%	1,992	Plastic Products	4.5%		11,659
#2 HDPE Plastic Natural Bottles	0.5%	0.1%	1,209	#1 PETE Plastic Products	0.0%	0.0%	58
#2 HDPE Plastic Colored Bottles	0.5%	0.1%	1,358	#2 HDPE Plastic Products	0.0%	0.0%	27
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	338	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	4	#5 PP Plastic Products	0.0%	0.0%	9
#5 PP Plastic Packaging	0.5%	0.2%	1,323	#6 PS Plastic Products	0.1%	0.1%	316
#6 PS Plastic Packaging	0.0%	0.0%	49	#7 Other Plastic Products	0.9%	0.6%	2,450
#7 Other Plastic Packaging	0.3%	0.2%	827	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.9%	0.6%	2,339	Plastic Garbage Bags	1.3%	0.3%	3,308
PLA/Compostable Plastic Packaging	0.0%	0.0%	36	Non-bag Plastic Film Products	0.2%	0.3%	480
Plastic Merchandise Bags	0.8%	0.2%	2,081	Bulky Rigid Plastic Products	1.6%	1.3%	4,180
Non-industrial Packaging Film Plastic	2.0%	0.5%	5,258	R/C Plastic Products	0.3%	0.2%	832
Industrial Packaging Film Plastic	0.1%	0.1%	382	Consumer Products	5.5%		14,349
Flexible Plastic Packaging	0.1%	0.1%	270	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.1%	129	Televisions - LCD	0.0%	0.0%	0
Metal	3.9%		10,089	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.7%	0.2%	1,736	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.2%	0.1%	545	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	36	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	0	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	1.0%	0.2%	2,641	Computer Printers	0.2%	0.4%	640
Food Cans - Coated	0.0%	0.0%	98	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.3%	1.2%	3,410	Other Consumer Electronics	0.6%	0.7%	1,458
R/C Metals	0.6%	0.3%	1,623	Textiles - Organic	2.0%	0.6%	5,225
Glass	3.2%		8,488	Textiles - Synthetic, Mixed, Unknown	0.7%	0.5%	1,752
Clear Glass Containers	1.6%	0.4%	4,171	Shoes, Purses, Belts	1.0%	0.6%	2,677
Green Glass Containers	0.6%	0.3%	1,667	Tires & Rubber	1.0%	1.2%	2,597
Brown Glass Containers	0.7%	0.3%	1,801	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.3%	849	Hazardous and Special Waste	0.2%		527
Organics	48.2%		126,353	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	8.2%	2.3%	21,379	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	14.2%	3.3%	37,293	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.6%	1.8%	6,923	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	4.2%	1.9%	11,023	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	10.2%	4.6%	26,821	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	5.3%	3.5%	13,993	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	2.9%	1.4%	7,475	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.6%	0.3%	1,445	Water Based Glues	0.0%	0.0%	0
Wood Wastes	1.5%		3,860	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.0%	0.0%	0	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	0.5%	0.8%	1,316	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.1%	0.1%	240	Varnish	0.0%	0.0%	0
Engineered Wood	0.2%	0.2%	445	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.5%	0.7%	1,223	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.2%	0.2%	502	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.1%	0.1%	133	Primers/Sealers	0.0%	0.0%	18
Construction Materials	1.0%		2,655	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.0%	0.0%	0	Solvents	0.0%	0.0%	36
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	67
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	20
Drywall	0.0%	0.0%	58	Dry-cell Batteries - Rechargeable	0.0%	0.0%	4
Carpet	0.1%	0.2%	311	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.5%	0.6%	1,267	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.1%	0.1%	156	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.1%	116	Oil Filters	0.0%	0.1%	80
R/C Construction Materials	0.3%	0.5%	747	Explosives	0.0%	0.0%	0
Residues	5.4%		14,136	Medical Wastes	0.0%	0.1%	93
Disposable Diapers	5.4%	1.6%	14,136	Sharps	0.0%	0.0%	2
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	9
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	62
Fines	0.0%	0.0%	0	Personal Care Products	0.0%	0.0%	87
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	49
Sample Count			24	Totals	100%		261,936

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

Table 30: Central WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	4.4%		1,537	Paper Products	0.6%		204
Newspaper Packaging	0.2%	0.3%	62	Newspaper	0.3%	0.4%	95
Cardboard/Kraft Paper Packaging	2.3%	2.5%	788	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	0	Magazines	0.0%	0.0%	0
Mixed/Low Grade Paper Packaging	0.6%	0.7%	204	High-Grade Paper Products	0.0%	0.0%	8
Aseptic and Polycoat Packaging	0.0%	0.0%	1	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.0%	0.0%	1	Mixed Low Grade Paper Products	0.0%	0.0%	0
R/C Paper Packaging	1.4%	2.2%	480	Compostable Paper Products	0.3%	0.5%	96
Plastic Packaging	1.1%		388	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.0%	0.0%	7	R/C Paper Products	0.0%	0.0%	4
#1 PETE Plastic Non-bottles	0.0%	0.0%	0	Plastic Products	1.4%		478
#2 HDPE Plastic Natural Bottles	0.3%	0.6%	120	#1 PETE Plastic Products	0.0%	0.0%	4
#2 HDPE Plastic Colored Bottles	0.0%	0.0%	0	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.3%	0.4%	116	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	1	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	0	#6 PS Plastic Products	0.0%	0.0%	1
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.0%	0.0%	8
#7 Other Plastic Packaging	0.0%	0.0%	2	PLA/Compostable Plastic Products	0.0%	0.1%	14
Expanded Polystyrene Packaging	0.0%	0.0%	1	Plastic Garbage Bags	0.3%	0.3%	89
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	10
Plastic Merchandise Bags	0.0%	0.0%	6	Bulky Rigid Plastic Products	0.6%	0.5%	203
Non-industrial Packaging Film Plastic	0.2%	0.2%	61	R/C Plastic Products	0.4%	0.7%	150
Industrial Packaging Film Plastic	0.2%	0.2%	74	Consumer Products	9.1%		3,178
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	0	Televisions - LCD	0.0%	0.0%	0
Metal	3.8%		1,328	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.0%	0.0%	2	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	0	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.2%	40	Computers	0.0%	0.0%	0
Other Nonferrous	0.2%	0.3%	61	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	0	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.7%	0.8%	229	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	2.9%	2.1%	996	Textiles - Organic	0.0%	0.0%	3
Glass	1.2%		421	Textiles - Synthetic, Mixed, Unknown	0.0%	0.0%	3
Clear Glass Containers	0.0%	0.0%	7	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	5.4%	8.7%	1,883
Brown Glass Containers	0.0%	0.0%	0	Furniture	3.7%	6.1%	1,290
Plate Glass	0.5%	0.6%	170	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.7%	0.9%	244	Hazardous and Special Waste	0.5%		166
Organics	0.1%		33	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.0%	0.0%	10	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.0%	0.0%	0	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	0	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.0%	0.0%	0	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	0.0%	0.0%	0	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.0%	0.0%	6	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.1%	17	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.4%	0.6%	137
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	33.3%		11,590	Oil-based Paint	0.0%	0.0%	0
Treated Wood	1.7%	1.8%	602	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	5.9%	3.0%	2,063	Lacquer	0.0%	0.0%	0
Dimensional Lumber	10.6%	5.1%	3,698	Varnish	0.0%	0.0%	0
Engineered Wood	6.4%	3.9%	2,235	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	5.6%	7.4%	1,957	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	1.6%	2.6%	560	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.4%	0.6%	136	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.0%	0.9%	340	Primers/Sealers	0.0%	0.0%	0
Construction Materials	44.5%		15,507	Stains	0.0%	0.0%	0
Natural Wood	0.4%	0.7%	149	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.1%	0.2%	44	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	4.2%	4.8%	1,469	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	9.1%	8.1%	3,154	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	3.4%	3.0%	1,172	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.3%	0.5%	100	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	2.7%	4.3%	931	Motor Oil	0.1%	0.1%	29
Asphalt Roofing	10.8%	10.4%	3,752	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.2%	0.3%	75	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.8%	1.0%	296	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	12.5%	5.7%	4,364	Explosives	0.0%	0.0%	0
Residues	0.0%		13	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.0%	0.0%	0	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.1%	13	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.0%	0.0%	0	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			20	Totals	100%		34,842

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

Table 31: Central WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	3.1%		1,243	Paper Products	2.4%		960
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.2%	0.2%	61
Cardboard/Kraft Paper Packaging	2.1%	1.4%	860	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	11	Magazines	0.6%	0.9%	239
Mixed/Low Grade Paper Packaging	0.5%	0.4%	203	High-Grade Paper Products	0.5%	0.7%	187
Aseptic and Polycoat Packaging	0.0%	0.1%	20	Other Groundwood Paper Products	0.1%	0.1%	23
Compostable Paper Packaging	0.2%	0.2%	64	Mixed Low Grade Paper Products	0.8%	0.9%	319
R/C Paper Packaging	0.2%	0.2%	85	Compostable Paper Products	0.3%	0.4%	119
Plastic Packaging	1.7%		678	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.1%	0.1%	59	R/C Paper Products	0.0%	0.0%	13
#1 PETE Plastic Non-bottles	0.1%	0.1%	21	Plastic Products	8.5%		3,452
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	12	#1 PETE Plastic Products	0.0%	0.0%	2
#2 HDPE Plastic Colored Bottles	0.1%	0.0%	27	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.3%	0.5%	137	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.2%	0.2%	62	#6 PS Plastic Products	0.1%	0.1%	35
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.6%	0.5%	243
#7 Other Plastic Packaging	0.0%	0.0%	7	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.1%	0.1%	29	Plastic Garbage Bags	0.3%	0.2%	142
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.4%	0.5%	162
Plastic Merchandise Bags	0.1%	0.1%	32	Bulky Rigid Plastic Products	6.0%	4.9%	2,439
Non-industrial Packaging Film Plastic	0.1%	0.1%	36	R/C Plastic Products	1.0%	1.0%	427
Industrial Packaging Film Plastic	0.3%	0.4%	110	Consumer Products	22.1%		8,983
Flexible Plastic Packaging	0.0%	0.0%	2	Televisions - CRT	1.4%	2.3%	579
R/C Plastic Packaging	0.4%	0.4%	144	Televisions - LCD	0.0%	0.0%	0
Metal	9.2%		3,758	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.1%	0.1%	42	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	2	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.2%	39	Computers	0.1%	0.2%	42
Other Nonferrous	0.5%	0.5%	192	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.1%	0.1%	33	Computer Printers	0.1%	0.2%	54
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.6%	1.0%	243
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.1%	0.2%	55
Other Ferrous Metal	5.6%	3.1%	2,273	Other Consumer Electronics	0.3%	0.4%	106
R/C Metals	2.9%	1.9%	1,178	Textiles - Organic	3.0%	2.0%	1,222
Glass	0.4%		145	Textiles - Synthetic, Mixed, Unknown	0.6%	0.5%	236
Clear Glass Containers	0.0%	0.0%	16	Shoes, Purses, Belts	0.2%	0.1%	64
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.3%	0.4%	109
Brown Glass Containers	0.0%	0.0%	0	Furniture	12.3%	8.8%	5,017
Plate Glass	0.0%	0.0%	0	Mattresses	3.1%	2.7%	1,255
Stoneware/Kitchen Ceramics	0.1%	0.1%	21	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.4%	108	Hazardous and Special Waste	0.1%		32
Organics	27.7%		11,277	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	1.0%	0.9%	393	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.9%	1.1%	349	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.1%	16	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.1%	0.1%	37	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	12.9%	9.4%	5,237	Compact Fluorescent Lamps	0.0%	0.0%	2
Yard & Garden Waste - Prunings	12.3%	11.5%	4,993	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.5%	0.9%	217	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.1%	0.1%	35	Water Based Glues	0.0%	0.0%	0
Wood Wastes	14.7%		5,984	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.0%	0.0%	0	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	3.1%	3.3%	1,253	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.9%	4.7%	1,199	Varnish	0.0%	0.0%	0
Engineered Wood	2.8%	3.1%	1,141	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	4.6%	5.8%	1,868	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.5%	0.6%	218	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.7%	0.8%	305	Primers/Sealers	0.0%	0.0%	0
Construction Materials	10.2%		4,166	Stains	0.0%	0.0%	0
Natural Wood	0.3%	0.5%	116	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.2%	0.2%	68	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	4.4%	7.2%	1,788	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	4.2%	3.0%	1,696	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.6%	0.7%	225	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.7%	0.8%	268	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.0%	5	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.0%	0.0%	0	Explosives	0.0%	0.0%	0
Residues	0.1%		30	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.0%	0.0%	0	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.1%	0.1%	30	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.1%	0.1%	31
Sample Count			22	Totals	100%		40,708

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



East Waste Generation Area Composition Tables

Table 32: East WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	8.1%		60,036	Paper Products	9.5%		70,388
Newspaper Packaging	0.1%	0.1%	923	Newspaper	0.6%	0.2%	4,568
Cardboard/Kraft Paper Packaging	3.3%	0.7%	24,330	Cardboard/Kraft Paper Products	0.1%	0.1%	380
Other Groundwood Paper Packaging	0.1%	0.1%	878	Magazines	0.4%	0.2%	2,983
Mixed/Low Grade Paper Packaging	2.6%	0.6%	19,532	High-Grade Paper Products	1.0%	0.5%	7,202
Aseptic and Polycoat Packaging	0.1%	0.1%	1,094	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	1.1%	0.4%	8,326	Mixed Low Grade Paper Products	1.6%	0.6%	11,991
R/C Paper Packaging	0.7%	0.3%	4,953	Compostable Paper Products	4.8%	0.9%	35,389
Plastic Packaging	7.8%		57,482	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.7%	0.2%	4,926	R/C Paper Products	1.1%	1.1%	7,875
#1 PETE Plastic Non-bottles	0.4%	0.1%	3,256	Plastic Products	4.3%		31,634
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	1,489	#1 PETE Plastic Products	0.0%	0.0%	61
#2 HDPE Plastic Colored Bottles	0.3%	0.1%	2,015	#2 HDPE Plastic Products	0.0%	0.0%	149
#2 HDPE Plastic Jars & Tubs	0.2%	0.1%	1,415	#3 PVC Plastic Products	0.0%	0.0%	9
#3 PVC Plastic Packaging	0.0%	0.0%	21	#4 LDPE Plastic Products	0.0%	0.0%	2
#4 LDPE Plastic Packaging	0.0%	0.0%	44	#5 PP Plastic Products	0.0%	0.0%	195
#5 PP Plastic Packaging	0.3%	0.1%	2,233	#6 PS Plastic Products	0.0%	0.0%	348
#6 PS Plastic Packaging	0.0%	0.0%	61	#7 Other Plastic Products	0.4%	0.1%	2,995
#7 Other Plastic Packaging	0.2%	0.1%	1,402	PLA/Compostable Plastic Products	0.0%	0.0%	28
Expanded Polystyrene Packaging	0.6%	0.4%	4,361	Plastic Garbage Bags	1.8%	0.3%	13,648
PLA/Compostable Plastic Packaging	0.0%	0.1%	295	Non-bag Plastic Film Products	0.2%	0.2%	1,592
Plastic Merchandise Bags	0.4%	0.1%	3,226	Bulky Rigid Plastic Products	1.0%	0.4%	7,131
Non-industrial Packaging Film Plastic	2.4%	0.8%	18,066	R/C Plastic Products	0.7%	0.3%	5,476
Industrial Packaging Film Plastic	1.7%	0.7%	12,350	Consumer Products	7.4%		54,431
Flexible Plastic Packaging	0.1%	0.1%	820	Televisions - CRT	0.1%	0.2%	705
R/C Plastic Packaging	0.2%	0.1%	1,501	Televisions - LCD	0.0%	0.1%	353
Metal	4.5%		33,512	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.3%	0.1%	2,316	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.2%	0.1%	1,158	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	437	Computers	0.1%	0.2%	784
Other Nonferrous	0.0%	0.0%	47	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.4%	0.1%	2,818	Computer Printers	0.0%	0.0%	66
Food Cans - Coated	0.0%	0.0%	118	Audio Equipment	0.0%	0.0%	333
White Goods	0.1%	0.1%	555	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.8%	1.2%	13,558	Other Consumer Electronics	0.1%	0.1%	430
R/C Metals	1.7%	0.6%	12,505	Textiles - Organic	1.6%	0.4%	11,720
Glass	1.7%		12,412	Textiles - Synthetic, Mixed, Unknown	0.5%	0.2%	3,701
Clear Glass Containers	0.6%	0.2%	4,546	Shoes, Purses, Belts	0.2%	0.1%	1,354
Green Glass Containers	0.2%	0.1%	1,330	Tires & Rubber	1.9%	1.0%	13,740
Brown Glass Containers	0.3%	0.1%	2,215	Furniture	2.1%	1.1%	15,461
Plate Glass	0.2%	0.2%	1,307	Mattresses	0.8%	0.6%	5,785
Stoneware/Kitchen Ceramics	0.1%	0.1%	1,100	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.1%	1,914	Hazardous and Special Waste	0.6%		4,491
Organics	32.3%		238,051	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	5.7%	1.2%	42,166	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	7.4%	2.0%	54,539	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.3%	0.5%	9,653	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.5%	0.5%	11,073	HID Lamps	0.1%	0.1%	578
Yard & Garden Waste - Leaves & Grass	9.7%	3.0%	71,600	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	1.6%	0.7%	11,903	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	4.0%	1.3%	29,353	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.1%	0.1%	399	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.2%	0.2%	1,135
Fruit Waste	0.3%	0.5%	2,237	Solvent-based Glues	0.0%	0.0%	2
R/C Organics	0.7%	0.3%	5,129	Water Based Glues	0.0%	0.0%	121
Wood Wastes	10.0%		73,492	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.1%	0.1%	685	Oil-based Clear Coatings	0.0%	0.0%	19
Painted Wood	1.2%	0.5%	8,860	Lacquer	0.0%	0.0%	0
Dimensional Lumber	1.7%	0.9%	12,846	Varnish	0.0%	0.0%	0
Engineered Wood	1.9%	0.8%	13,998	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	3.1%	1.4%	23,055	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.3%	0.2%	1,981	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.1%	0.1%	509	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.6%	0.7%	11,559	Primers/Sealers	0.0%	0.0%	0
Construction Materials	11.0%		80,826	Stains	0.0%	0.0%	0
Natural Wood	0.4%	0.5%	2,641	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	119
Insulation	0.2%	0.2%	1,148	Solvents	0.0%	0.0%	0
Asphalt Paving	0.1%	0.2%	1,086	Caustic Cleaners	0.0%	0.0%	7
Concrete	1.9%	1.9%	13,971	Dry-cell Batteries - Single Use	0.0%	0.0%	253
Drywall	1.7%	1.0%	12,571	Dry-cell Batteries - Rechargeable	0.0%	0.0%	2
Carpet	1.2%	0.6%	8,701	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.5%	0.6%	3,608	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.8%	1.3%	13,597	Motor Oil	0.0%	0.0%	106
Asphalt Roofing	0.5%	0.6%	3,822	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	100	Other Vehicle Fluids	0.0%	0.0%	20
Ceramics & Brick	0.9%	1.1%	6,552	Oil Filters	0.0%	0.0%	4
R/C Construction Materials	1.8%	0.9%	13,030	Explosives	0.0%	0.0%	0
Residues	2.9%		21,133	Medical Wastes	0.2%	0.3%	1,481
Disposable Diapers	2.3%	0.7%	16,950	Sharps	0.0%	0.0%	0
Ash	0.2%	0.2%	1,112	Pharmaceuticals/Vitamins	0.0%	0.0%	283
Dust	0.0%	0.1%	289	Other Cleaners/Chemicals	0.0%	0.0%	88
Fines	0.4%	0.3%	2,782	Personal Care Products	0.0%	0.0%	223
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	51
Sample Count	150			Totals	100%		737,889

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

Table 33: East WGA Commercial Disposed Waste, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	8.9%		28,199	Paper Products	10.5%		33,261
Newspaper Packaging	0.1%	0.2%	443	Newspaper	0.3%	0.1%	827
Cardboard/Kraft Paper Packaging	4.0%	1.3%	12,590	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.1%	0.1%	343	Magazines	0.1%	0.1%	317
Mixed/Low Grade Paper Packaging	1.8%	0.8%	5,739	High-Grade Paper Products	0.7%	0.5%	2,381
Aseptic and Polycoat Packaging	0.1%	0.1%	438	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	1.8%	0.9%	5,562	Mixed Low Grade Paper Products	1.8%	1.1%	5,599
R/C Paper Packaging	1.0%	0.6%	3,084	Compostable Paper Products	5.4%	1.6%	17,183
Plastic Packaging	10.1%		32,117	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.7%	0.3%	2,182	R/C Paper Products	2.2%	2.6%	6,953
#1 PETE Plastic Non-bottles	0.4%	0.2%	1,273	Plastic Products	4.8%		15,235
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	579	#1 PETE Plastic Products	0.0%	0.0%	19
#2 HDPE Plastic Colored Bottles	0.1%	0.1%	373	#2 HDPE Plastic Products	0.0%	0.0%	19
#2 HDPE Plastic Jars & Tubs	0.3%	0.2%	804	#3 PVC Plastic Products	0.0%	0.0%	9
#3 PVC Plastic Packaging	0.0%	0.0%	7	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	44	#5 PP Plastic Products	0.0%	0.0%	96
#5 PP Plastic Packaging	0.2%	0.1%	679	#6 PS Plastic Products	0.1%	0.1%	162
#6 PS Plastic Packaging	0.0%	0.0%	26	#7 Other Plastic Products	0.3%	0.2%	864
#7 Other Plastic Packaging	0.2%	0.1%	715	PLA/Compostable Plastic Products	0.0%	0.0%	14
Expanded Polystyrene Packaging	0.8%	0.8%	2,481	Plastic Garbage Bags	2.2%	0.6%	7,053
PLA/Compostable Plastic Packaging	0.0%	0.0%	26	Non-bag Plastic Film Products	0.3%	0.3%	923
Plastic Merchandise Bags	0.1%	0.1%	470	Bulky Rigid Plastic Products	1.5%	0.9%	4,658
Non-industrial Packaging Film Plastic	3.0%	1.8%	9,605	R/C Plastic Products	0.4%	0.3%	1,419
Industrial Packaging Film Plastic	3.6%	1.6%	11,325	Consumer Products	7.1%		22,655
Flexible Plastic Packaging	0.2%	0.2%	529	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.3%	0.3%	1,000	Televisions - LCD	0.0%	0.0%	0
Metal	4.9%		15,679	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.2%	0.1%	665	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.1%	411	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	380	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	9	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.2%	0.1%	671	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	23	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.1%	2.4%	6,690	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	2.1%	1.3%	6,830	Textiles - Organic	0.8%	0.4%	2,447
Glass	1.1%		3,509	Textiles - Synthetic, Mixed, Unknown	0.5%	0.4%	1,597
Clear Glass Containers	0.3%	0.1%	923	Shoes, Purses, Belts	0.0%	0.0%	63
Green Glass Containers	0.1%	0.1%	233	Tires & Rubber	3.0%	2.1%	9,654
Brown Glass Containers	0.2%	0.1%	615	Furniture	2.2%	2.4%	6,841
Plate Glass	0.1%	0.1%	179	Mattresses	0.6%	1.1%	2,053
Stoneware/Kitchen Ceramics	0.2%	0.2%	485	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.2%	1,074	Hazardous and Special Waste	0.7%		2,119
Organics	25.9%		82,188	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	7.2%	2.5%	22,885	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	7.4%	3.9%	23,558	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.4%	0.7%	4,560	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.0%	0.8%	6,387	HID Lamps	0.2%	0.3%	503
Yard & Garden Waste - Leaves & Grass	3.3%	2.3%	10,542	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	1.0%	0.9%	3,307	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	1.8%	1.9%	5,732	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.7%	1.2%	2,237	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.9%	0.6%	2,980	Water Based Glues	0.0%	0.0%	0
Wood Wastes	12.0%		38,131	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.1%	0.1%	333	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	1.1%	0.8%	3,579	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.2%	2.1%	7,067	Varnish	0.0%	0.0%	0
Engineered Wood	1.6%	1.4%	5,122	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	5.1%	2.9%	16,363	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.2%	0.2%	501	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	75	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.6%	1.1%	5,091	Primers/Sealers	0.0%	0.0%	0
Construction Materials	12.6%		40,033	Stains	0.0%	0.0%	0
Natural Wood	0.1%	0.1%	196	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.3%	0.5%	934	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	7
Concrete	2.9%	3.7%	9,214	Dry-cell Batteries - Single Use	0.0%	0.0%	8
Drywall	1.6%	2.0%	5,084	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.1%	0.1%	221	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.0%	0.0%	0	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	2.4%	1.8%	7,643	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.9%	1.5%	2,810	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	1.6%	2.6%	5,241	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	2.7%	1.9%	8,689	Explosives	0.0%	0.0%	0
Residues	1.5%		4,646	Medical Wastes	0.5%	0.7%	1,477
Disposable Diapers	0.7%	0.5%	2,167	Sharps	0.0%	0.0%	0
Ash	0.1%	0.1%	247	Pharmaceuticals/Vitamins	0.0%	0.0%	33
Dust	0.1%	0.1%	289	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.6%	0.7%	1,943	Personal Care Products	0.0%	0.0%	40
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	51
Sample Count			55	Totals	100%		317,773

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

Table 34: East WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	8.4%		27,824	Paper Products	10.7%		35,355
Newspaper Packaging	0.1%	0.2%	459	Newspaper	1.1%	0.4%	3,702
Cardboard/Kraft Paper Packaging	2.8%	1.1%	9,191	Cardboard/Kraft Paper Products	0.1%	0.2%	380
Other Groundwood Paper Packaging	0.2%	0.1%	524	Magazines	0.7%	0.3%	2,473
Mixed/Low Grade Paper Packaging	3.9%	1.0%	12,708	High-Grade Paper Products	1.4%	0.9%	4,723
Aseptic and Polycoat Packaging	0.2%	0.1%	650	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.8%	0.3%	2,672	Mixed Low Grade Paper Products	1.8%	0.9%	6,078
R/C Paper Packaging	0.5%	0.2%	1,619	Compostable Paper Products	5.3%	1.4%	17,636
Plastic Packaging	7.0%		23,038	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.8%	0.2%	2,612	R/C Paper Products	0.1%	0.1%	362
#1 PETE Plastic Non-bottles	0.6%	0.2%	1,949	Plastic Products	3.7%		12,300
#2 HDPE Plastic Natural Bottles	0.3%	0.1%	891	#1 PETE Plastic Products	0.0%	0.0%	37
#2 HDPE Plastic Colored Bottles	0.5%	0.2%	1,605	#2 HDPE Plastic Products	0.0%	0.1%	130
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	386	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	14	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	100
#5 PP Plastic Packaging	0.5%	0.1%	1,522	#6 PS Plastic Products	0.1%	0.0%	167
#6 PS Plastic Packaging	0.0%	0.0%	32	#7 Other Plastic Products	0.5%	0.2%	1,717
#7 Other Plastic Packaging	0.2%	0.1%	670	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.4%	0.2%	1,475	Plastic Garbage Bags	1.9%	0.3%	6,338
PLA/Compostable Plastic Packaging	0.1%	0.1%	269	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.8%	0.2%	2,686	Bulky Rigid Plastic Products	0.3%	0.4%	1,049
Non-industrial Packaging Film Plastic	2.4%	0.7%	7,957	R/C Plastic Products	0.8%	0.4%	2,763
Industrial Packaging Film Plastic	0.1%	0.1%	306	Consumer Products	4.7%		15,600
Flexible Plastic Packaging	0.1%	0.1%	288	Televisions - CRT	0.2%	0.4%	705
R/C Plastic Packaging	0.1%	0.1%	376	Televisions - LCD	0.1%	0.2%	353
Metal	3.4%		11,168	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.5%	0.2%	1,601	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.2%	0.1%	719	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	56	Computers	0.2%	0.4%	784
Other Nonferrous	0.0%	0.0%	14	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.6%	0.2%	2,093	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	93	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.2%	1.1%	3,921	Other Consumer Electronics	0.1%	0.2%	306
R/C Metals	0.8%	0.5%	2,672	Textiles - Organic	2.4%	0.9%	8,078
Glass	2.3%		7,642	Textiles - Synthetic, Mixed, Unknown	0.5%	0.2%	1,578
Clear Glass Containers	1.0%	0.5%	3,438	Shoes, Purses, Belts	0.4%	0.2%	1,290
Green Glass Containers	0.2%	0.1%	756	Tires & Rubber	0.8%	0.9%	2,507
Brown Glass Containers	0.3%	0.2%	1,114	Furniture	0.0%	0.0%	0
Plate Glass	0.3%	0.5%	1,127	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.1%	0.1%	464	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.2%	0.2%	742	Hazardous and Special Waste	0.6%		2,068
Organics	45.6%		150,606	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	5.7%	1.2%	18,675	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	9.2%	2.3%	30,515	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.5%	0.8%	4,937	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.4%	0.8%	4,556	HID Lamps	0.0%	0.0%	74
Yard & Garden Waste - Leaves & Grass	18.0%	6.2%	59,342	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	2.2%	1.2%	7,261	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	6.9%	2.3%	22,809	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.1%	0.2%	399	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.3%	0.4%	1,132
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.6%	0.5%	2,111	Water Based Glues	0.0%	0.1%	121
Wood Wastes	1.9%		6,259	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.0%	0.0%	0	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	0.3%	0.4%	993	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.3%	0.3%	1,095	Varnish	0.0%	0.0%	0
Engineered Wood	0.7%	0.6%	2,297	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.0%	0.0%	14	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.1%	0.2%	413	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.4%	0.4%	1,448	Primers/Sealers	0.0%	0.0%	0
Construction Materials	6.7%		22,011	Stains	0.0%	0.0%	0
Natural Wood	0.7%	1.2%	2,445	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.0%	0.0%	0	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.1%	121	Caustic Cleaners	0.0%	0.0%	0
Concrete	1.4%	2.1%	4,501	Dry-cell Batteries - Single Use	0.1%	0.1%	242
Drywall	0.7%	0.7%	2,324	Dry-cell Batteries - Rechargeable	0.0%	0.0%	2
Carpet	1.0%	1.1%	3,364	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.8%	1.3%	2,672	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.8%	2.3%	5,953	Motor Oil	0.0%	0.0%	65
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.2%	0.2%	543	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.0%	0.0%	88	Explosives	0.0%	0.0%	0
Residues	4.9%		16,188	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	4.4%	1.4%	14,527	Sharps	0.0%	0.0%	0
Ash	0.3%	0.4%	849	Pharmaceuticals/Vitamins	0.1%	0.1%	251
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.2%	0.2%	812	Personal Care Products	0.1%	0.0%	181
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			28	Totals	100%		330,058

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

Table 35: East WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	3.3%		1,466	Paper Products	0.7%		304
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.0%	0.0%	0
Cardboard/Kraft Paper Packaging	2.4%	1.3%	1,064	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	9	Magazines	0.4%	0.6%	173
Mixed/Low Grade Paper Packaging	0.8%	0.7%	334	High-Grade Paper Products	0.0%	0.0%	10
Aseptic and Polycoat Packaging	0.0%	0.0%	0	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.0%	0.0%	0	Mixed Low Grade Paper Products	0.3%	0.4%	112
R/C Paper Packaging	0.1%	0.2%	60	Compostable Paper Products	0.0%	0.0%	8
Plastic Packaging	2.2%		972	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.0%	0.0%	6	R/C Paper Products	0.0%	0.0%	1
#1 PETE Plastic Non-bottles	0.0%	0.0%	1	Plastic Products	4.3%		1,901
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	2	#1 PETE Plastic Products	0.0%	0.0%	1
#2 HDPE Plastic Colored Bottles	0.0%	0.0%	11	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.3%	0.3%	150	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	2	#6 PS Plastic Products	0.0%	0.0%	0
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.1%	0.2%	59
#7 Other Plastic Packaging	0.0%	0.0%	1	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.7%	0.7%	318	Plastic Garbage Bags	0.1%	0.1%	34
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	1.5%	2.4%	647
Plastic Merchandise Bags	0.0%	0.0%	1	Bulky Rigid Plastic Products	0.6%	0.4%	262
Non-industrial Packaging Film Plastic	0.6%	0.9%	286	R/C Plastic Products	2.0%	3.2%	898
Industrial Packaging Film Plastic	0.4%	0.3%	183	Consumer Products	4.1%		1,836
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	11	Televisions - LCD	0.0%	0.0%	0
Metal	4.2%		1,883	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.0%	0.0%	3	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	1	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	0	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	1	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	0	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.7%	2.8%	1,219	Other Consumer Electronics	0.0%	0.1%	14
R/C Metals	1.5%	1.2%	658	Textiles - Organic	0.5%	0.5%	216
Glass	0.3%		119	Textiles - Synthetic, Mixed, Unknown	0.2%	0.2%	68
Clear Glass Containers	0.0%	0.0%	0	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.6%	0.9%	265
Brown Glass Containers	0.0%	0.0%	0	Furniture	1.8%	2.7%	810
Plate Glass	0.0%	0.0%	0	Mattresses	1.0%	1.7%	464
Stoneware/Kitchen Ceramics	0.2%	0.4%	95	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.1%	0.1%	23	Hazardous and Special Waste	0.3%		120
Organics	3.0%		1,332	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.0%	0.0%	0	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.1%	0.2%	63	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	0	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.0%	0.0%	0	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	0.9%	1.4%	393	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	2.0%	2.2%	877	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	2
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	45.8%		20,329	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.6%	0.5%	270	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	6.9%	5.6%	3,054	Lacquer	0.0%	0.0%	0
Dimensional Lumber	5.2%	3.1%	2,303	Varnish	0.0%	0.0%	0
Engineered Wood	11.7%	6.5%	5,198	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	11.7%	7.4%	5,198	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	2.2%	2.3%	994	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	7.5%	5.8%	3,312	Primers/Sealers	0.0%	0.0%	0
Construction Materials	31.8%		14,121	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.3%	0.4%	119
Insulation	0.5%	0.8%	213	Solvents	0.0%	0.0%	0
Asphalt Paving	2.2%	3.6%	965	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	10.8%	7.5%	4,795	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	6.5%	5.1%	2,864	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	1.1%	1.1%	476	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.0%	0.0%	0	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	1.5%	1.5%	684	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.2%	0.4%	100	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	1.2%	1.8%	552	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	7.8%	6.6%	3,473	Explosives	0.0%	0.0%	0
Residues	0.0%		11	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.0%	0.0%	0	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.0%	0.0%	11	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count	33			Totals	100%		44,395

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

Table 36: East WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	5.6%		2,547	Paper Products	3.2%		1,468
Newspaper Packaging	0.0%	0.0%	21	Newspaper	0.1%	0.1%	38
Cardboard/Kraft Paper Packaging	3.3%	1.8%	1,485	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	2	Magazines	0.0%	0.0%	20
Mixed/Low Grade Paper Packaging	1.6%	1.2%	751	High-Grade Paper Products	0.2%	0.2%	88
Aseptic and Polycoat Packaging	0.0%	0.0%	6	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.2%	0.3%	92	Mixed Low Grade Paper Products	0.4%	0.3%	201
R/C Paper Packaging	0.4%	0.5%	190	Compostable Paper Products	1.2%	0.6%	562
Plastic Packaging	3.0%		1,354	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.3%	0.2%	126	R/C Paper Products	1.2%	1.7%	558
#1 PETE Plastic Non-bottles	0.1%	0.1%	33	Plastic Products	4.8%		2,198
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	17	#1 PETE Plastic Products	0.0%	0.0%	5
#2 HDPE Plastic Colored Bottles	0.1%	0.0%	26	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.2%	0.2%	75	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	2
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.1%	0.1%	30	#6 PS Plastic Products	0.0%	0.0%	19
#6 PS Plastic Packaging	0.0%	0.0%	3	#7 Other Plastic Products	0.8%	0.5%	355
#7 Other Plastic Packaging	0.0%	0.0%	16	PLA/Compostable Plastic Products	0.0%	0.0%	14
Expanded Polystyrene Packaging	0.2%	0.1%	86	Plastic Garbage Bags	0.5%	0.3%	222
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.1%	0.1%	23
Plastic Merchandise Bags	0.2%	0.1%	69	Bulky Rigid Plastic Products	2.5%	1.5%	1,162
Non-industrial Packaging Film Plastic	0.5%	0.3%	217	R/C Plastic Products	0.9%	0.4%	396
Industrial Packaging Film Plastic	1.2%	1.2%	535	Consumer Products	31.4%		14,341
Flexible Plastic Packaging	0.0%	0.0%	3	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.3%	0.4%	115	Televisions - LCD	0.0%	0.0%	0
Metal	10.5%		4,783	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.1%	0.1%	47	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	27	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	1	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.1%	23	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.1%	0.1%	55	Computer Printers	0.1%	0.2%	66
Food Cans - Coated	0.0%	0.0%	2	Audio Equipment	0.7%	0.7%	333
White Goods	1.2%	2.0%	555	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	3.8%	3.4%	1,729	Other Consumer Electronics	0.2%	0.3%	110
R/C Metals	5.1%	2.5%	2,344	Textiles - Organic	2.1%	1.2%	980
Glass	2.5%		1,144	Textiles - Synthetic, Mixed, Unknown	1.0%	0.6%	459
Clear Glass Containers	0.4%	0.3%	186	Shoes, Purses, Belts	0.0%	0.0%	2
Green Glass Containers	0.7%	1.1%	341	Tires & Rubber	2.9%	3.3%	1,315
Brown Glass Containers	1.1%	1.4%	486	Furniture	17.1%	8.2%	7,809
Plate Glass	0.0%	0.0%	0	Mattresses	7.2%	6.3%	3,268
Stoneware/Kitchen Ceramics	0.1%	0.2%	56	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.2%	0.2%	75	Hazardous and Special Waste	0.4%		183
Organics	8.6%		3,925	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	1.3%	0.9%	606	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.9%	0.9%	402	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.3%	0.4%	156	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.3%	0.2%	130	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	2.9%	2.8%	1,324	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	1.0%	1.5%	458	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	1.8%	2.2%	812	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	3
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.1%	0.1%	38	Water Based Glues	0.0%	0.0%	0
Wood Wastes	19.2%		8,773	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.2%	0.3%	82	Oil-based Clear Coatings	0.0%	0.1%	19
Painted Wood	2.7%	2.7%	1,234	Lacquer	0.0%	0.0%	0
Dimensional Lumber	5.2%	3.3%	2,380	Varnish	0.0%	0.0%	0
Engineered Wood	3.0%	2.2%	1,382	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	3.3%	3.8%	1,495	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	1.0%	1.1%	472	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	21	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	3.7%	2.9%	1,709	Primers/Sealers	0.0%	0.0%	0
Construction Materials	10.2%		4,661	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.0%	0.0%	0	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.6%	0.9%	257	Dry-cell Batteries - Single Use	0.0%	0.0%	2
Drywall	0.8%	1.1%	367	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	4.9%	3.3%	2,252	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	1.0%	1.0%	460	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.0%	0.0%	1	Motor Oil	0.1%	0.1%	41
Asphalt Roofing	0.7%	1.2%	328	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.1%	20
Ceramics & Brick	0.5%	0.5%	217	Oil Filters	0.0%	0.0%	4
R/C Construction Materials	1.7%	2.0%	779	Explosives	0.0%	0.0%	0
Residues	0.6%		288	Medical Wastes	0.0%	0.0%	4
Disposable Diapers	0.6%	0.6%	256	Sharps	0.0%	0.0%	0
Ash	0.0%	0.1%	16	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.2%	0.3%	88
Fines	0.0%	0.1%	16	Personal Care Products	0.0%	0.0%	2
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			34	Totals	100%		45,663

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



Northwest Waste Generation Area Composition Tables

Table 37: Northwest WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	8.0%		22,327	Paper Products	6.9%		19,157
Newspaper Packaging	0.2%	0.2%	442	Newspaper	0.6%	0.5%	1,611
Cardboard/Kraft Paper Packaging	3.3%	1.0%	9,115	Cardboard/Kraft Paper Products	0.1%	0.1%	264
Other Groundwood Paper Packaging	0.1%	0.1%	271	Magazines	0.1%	0.1%	293
Mixed/Low Grade Paper Packaging	2.4%	0.8%	6,760	High-Grade Paper Products	0.4%	0.2%	1,170
Aseptic and Polycoat Packaging	0.2%	0.1%	430	Other Groundwood Paper Products	0.0%	0.0%	15
Compostable Paper Packaging	0.7%	0.3%	1,976	Mixed Low Grade Paper Products	0.5%	0.3%	1,486
R/C Paper Packaging	1.2%	0.6%	3,333	Compostable Paper Products	4.8%	1.3%	13,386
Plastic Packaging	5.2%		14,429	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.5%	0.1%	1,326	R/C Paper Products	0.3%	0.2%	933
#1 PETE Plastic Non-bottles	0.4%	0.1%	1,089	Plastic Products	5.2%		14,604
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	533	#1 PETE Plastic Products	0.0%	0.0%	120
#2 HDPE Plastic Colored Bottles	0.1%	0.1%	387	#2 HDPE Plastic Products	0.0%	0.0%	15
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	385	#3 PVC Plastic Products	0.0%	0.0%	64
#3 PVC Plastic Packaging	0.0%	0.0%	7	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	26	#5 PP Plastic Products	0.0%	0.0%	73
#5 PP Plastic Packaging	0.2%	0.1%	691	#6 PS Plastic Products	0.0%	0.0%	93
#6 PS Plastic Packaging	0.0%	0.0%	53	#7 Other Plastic Products	0.5%	0.3%	1,325
#7 Other Plastic Packaging	0.0%	0.0%	136	PLA/Compostable Plastic Products	0.0%	0.0%	12
Expanded Polystyrene Packaging	0.3%	0.2%	858	Plastic Garbage Bags	1.8%	0.4%	4,991
PLA/Compostable Plastic Packaging	0.0%	0.0%	18	Non-bag Plastic Film Products	0.5%	0.5%	1,421
Plastic Merchandise Bags	0.4%	0.1%	991	Bulky Rigid Plastic Products	0.9%	0.5%	2,565
Non-industrial Packaging Film Plastic	2.3%	1.0%	6,405	R/C Plastic Products	1.4%	1.3%	3,925
Industrial Packaging Film Plastic	0.3%	0.2%	916	Consumer Products	8.3%		23,130
Flexible Plastic Packaging	0.1%	0.0%	150	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.2%	0.1%	460	Televisions - LCD	0.0%	0.0%	0
Metal	5.8%		16,021	Television Peripherals	0.1%	0.2%	295
Aluminum Beverage Cans	0.2%	0.1%	473	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	278	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	296	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.1%	128	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.3%	0.1%	803	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	107	Audio Equipment	0.0%	0.0%	0
White Goods	0.9%	1.5%	2,581	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.7%	0.9%	4,815	Other Consumer Electronics	0.0%	0.1%	84
R/C Metals	2.3%	1.2%	6,540	Textiles - Organic	1.6%	0.8%	4,427
Glass	1.8%		4,898	Textiles - Synthetic, Mixed, Unknown	0.7%	0.5%	2,022
Clear Glass Containers	0.6%	0.2%	1,690	Shoes, Purses, Belts	0.2%	0.2%	515
Green Glass Containers	0.3%	0.2%	812	Tires & Rubber	0.2%	0.1%	501
Brown Glass Containers	0.4%	0.2%	1,058	Furniture	4.2%	3.7%	11,821
Plate Glass	0.0%	0.1%	124	Mattresses	1.2%	1.5%	3,464
Stoneware/Kitchen Ceramics	0.1%	0.1%	417	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.2%	796	Hazardous and Special Waste	2.3%		6,460
Organics	29.3%		81,500	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	7.4%	2.0%	20,571	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	6.7%	1.8%	18,718	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	3.6%	1.8%	10,047	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.8%	1.1%	7,896	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	3.9%	2.4%	10,916	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	1.5%	1.4%	4,206	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	2.9%	1.5%	8,113	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	81
Fruit Waste	0.1%	0.1%	195	Solvent-based Glues	0.4%	0.6%	1,069
R/C Organics	0.3%	0.2%	838	Water Based Glues	0.0%	0.0%	0
Wood Wastes	13.3%		37,088	Oil-based Paint	0.0%	0.0%	10
Treated Wood	3.4%	2.8%	9,547	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	1.4%	1.3%	3,896	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.9%	1.8%	8,099	Varnish	0.0%	0.0%	0
Engineered Wood	2.8%	2.4%	7,704	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.3%	1.5%	3,498	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.6%	0.5%	1,782	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.1%	0.2%	308	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.8%	1.2%	2,255	Primers/Sealers	0.0%	0.0%	0
Construction Materials	9.5%		26,582	Stains	0.0%	0.0%	0
Natural Wood	0.6%	0.7%	1,745	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.1%	0.0%	142	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.4%	0.4%	1,089	Dry-cell Batteries - Single Use	0.0%	0.0%	18
Drywall	2.0%	1.7%	5,619	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.9%	0.8%	2,580	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.3%	0.4%	776	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.0%	1.3%	2,843	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	1.6%	1.9%	4,547	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	69	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	1.4%	1.5%	3,840	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	1.2%	0.9%	3,332	Explosives	0.0%	0.0%	0
Residues	4.4%		12,224	Medical Wastes	1.7%	2.4%	4,767
Disposable Diapers	3.9%	1.7%	10,817	Sharps	0.0%	0.0%	14
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	18
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.5%	0.7%	1,407	Personal Care Products	0.2%	0.2%	464
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	19
Sample Count	57			Totals	100%		278,420

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

Table 38: Northwest WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	9.5%		14,133	Paper Products	6.9%		10,247
Newspaper Packaging	0.0%	0.0%	25	Newspaper	0.8%	0.9%	1,211
Cardboard/Kraft Paper Packaging	4.4%	1.8%	6,573	Cardboard/Kraft Paper Products	0.1%	0.2%	180
Other Groundwood Paper Packaging	0.1%	0.1%	137	Magazines	0.1%	0.1%	131
Mixed/Low Grade Paper Packaging	2.3%	1.1%	3,385	High-Grade Paper Products	0.3%	0.2%	460
Aseptic and Polycoat Packaging	0.2%	0.1%	243	Other Groundwood Paper Products	0.0%	0.0%	15
Compostable Paper Packaging	0.6%	0.3%	940	Mixed Low Grade Paper Products	0.5%	0.3%	708
R/C Paper Packaging	1.9%	1.1%	2,829	Compostable Paper Products	4.8%	2.1%	7,051
Plastic Packaging	6.4%		9,453	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.6%	0.2%	855	R/C Paper Products	0.3%	0.3%	490
#1 PETE Plastic Non-bottles	0.4%	0.2%	521	Plastic Products	5.9%		8,729
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	308	#1 PETE Plastic Products	0.1%	0.1%	97
#2 HDPE Plastic Colored Bottles	0.1%	0.1%	116	#2 HDPE Plastic Products	0.0%	0.0%	5
#2 HDPE Plastic Jars & Tubs	0.2%	0.2%	316	#3 PVC Plastic Products	0.0%	0.1%	51
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.1%	73
#5 PP Plastic Packaging	0.2%	0.1%	255	#6 PS Plastic Products	0.0%	0.0%	23
#6 PS Plastic Packaging	0.0%	0.0%	43	#7 Other Plastic Products	0.5%	0.3%	688
#7 Other Plastic Packaging	0.0%	0.0%	61	PLA/Compostable Plastic Products	0.0%	0.0%	10
Expanded Polystyrene Packaging	0.4%	0.4%	622	Plastic Garbage Bags	2.3%	0.8%	3,448
PLA/Compostable Plastic Packaging	0.0%	0.0%	18	Non-bag Plastic Film Products	0.8%	1.0%	1,221
Plastic Merchandise Bags	0.4%	0.2%	570	Bulky Rigid Plastic Products	0.8%	0.7%	1,130
Non-industrial Packaging Film Plastic	3.1%	1.9%	4,531	R/C Plastic Products	1.3%	1.8%	1,982
Industrial Packaging Film Plastic	0.5%	0.4%	733	Consumer Products	7.8%		11,550
Flexible Plastic Packaging	0.1%	0.1%	107	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.3%	0.2%	397	Televisions - LCD	0.0%	0.0%	0
Metal	6.7%		9,862	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.2%	0.1%	331	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	99	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	116	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	15	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.2%	0.1%	271	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.1%	0.1%	86	Audio Equipment	0.0%	0.0%	0
White Goods	1.7%	2.8%	2,581	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.1%	1.6%	3,102	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	2.2%	1.5%	3,261	Textiles - Organic	2.1%	1.5%	3,182
Glass	2.1%		3,178	Textiles - Synthetic, Mixed, Unknown	0.8%	0.8%	1,246
Clear Glass Containers	0.7%	0.4%	1,004	Shoes, Purses, Belts	0.2%	0.2%	260
Green Glass Containers	0.4%	0.3%	533	Tires & Rubber	0.2%	0.2%	278
Brown Glass Containers	0.4%	0.2%	630	Furniture	3.8%	6.3%	5,704
Plate Glass	0.1%	0.1%	124	Mattresses	0.6%	1.0%	880
Stoneware/Kitchen Ceramics	0.2%	0.2%	298	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.4%	0.4%	589	Hazardous and Special Waste	3.6%		5,403
Organics	32.4%		48,031	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	9.6%	3.6%	14,256	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	7.3%	3.0%	10,851	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	5.8%	3.4%	8,530	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	3.5%	1.8%	5,125	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	3.7%	3.8%	5,557	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.1%	0.1%	121	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	2.0%	2.4%	2,996	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.1%	0.1%	81
Fruit Waste	0.1%	0.2%	195	Solvent-based Glues	0.7%	1.1%	1,069
R/C Organics	0.3%	0.2%	399	Water Based Glues	0.0%	0.0%	0
Wood Wastes	12.9%		19,078	Oil-based Paint	0.0%	0.0%	0
Treated Wood	2.4%	3.6%	3,512	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	0.3%	0.4%	465	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.3%	3.0%	3,438	Varnish	0.0%	0.0%	0
Engineered Wood	4.4%	4.5%	6,583	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.3%	2.2%	1,969	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.4%	0.4%	635	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.2%	0.3%	293	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.5%	2.2%	2,182	Primers/Sealers	0.0%	0.0%	0
Construction Materials	1.7%		2,450	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	30	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.0%	0.0%	8	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	13
Drywall	0.0%	0.0%	0	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.5%	0.8%	695	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.0%	0.0%	0	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.2%	0.3%	319	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.9%	1.1%	1,398	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.0%	0	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.0%	0.0%	0	Explosives	0.0%	0.0%	0
Residues	4.2%		6,176	Medical Wastes	2.9%	4.4%	4,230
Disposable Diapers	3.3%	3.0%	4,922	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	10
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.8%	1.4%	1,254	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			24	Totals	100%		148,289

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

Table 39: Northwest WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	10.4%		5,779	Paper Products	13.5%		7,521
Newspaper Packaging	0.7%	0.8%	417	Newspaper	0.7%	0.5%	367
Cardboard/Kraft Paper Packaging	2.4%	1.2%	1,324	Cardboard/Kraft Paper Products	0.2%	0.2%	84
Other Groundwood Paper Packaging	0.2%	0.1%	105	Magazines	0.3%	0.2%	162
Mixed/Low Grade Paper Packaging	4.8%	2.4%	2,677	High-Grade Paper Products	1.2%	0.7%	663
Aseptic and Polycoat Packaging	0.2%	0.1%	117	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	1.4%	1.4%	803	Mixed Low Grade Paper Products	0.8%	0.7%	420
R/C Paper Packaging	0.6%	0.2%	336	Compostable Paper Products	10.2%	2.4%	5,667
Plastic Packaging	6.9%		3,843	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.7%	0.3%	405	R/C Paper Products	0.3%	0.3%	158
#1 PETE Plastic Non-bottles	0.8%	0.3%	463	Plastic Products	3.4%		1,863
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	112	#1 PETE Plastic Products	0.0%	0.0%	10
#2 HDPE Plastic Colored Bottles	0.4%	0.1%	206	#2 HDPE Plastic Products	0.0%	0.0%	10
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	65	#3 PVC Plastic Products	0.0%	0.0%	14
#3 PVC Plastic Packaging	0.0%	0.0%	7	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.1%	26	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.5%	0.2%	274	#6 PS Plastic Products	0.1%	0.1%	56
#6 PS Plastic Packaging	0.0%	0.0%	10	#7 Other Plastic Products	0.3%	0.3%	184
#7 Other Plastic Packaging	0.1%	0.1%	52	PLA/Compostable Plastic Products	0.0%	0.0%	2
Expanded Polystyrene Packaging	0.3%	0.1%	195	Plastic Garbage Bags	2.1%	0.5%	1,192
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.7%	0.2%	375	Bulky Rigid Plastic Products	0.0%	0.0%	0
Non-industrial Packaging Film Plastic	2.5%	0.9%	1,416	R/C Plastic Products	0.7%	0.5%	395
Industrial Packaging Film Plastic	0.3%	0.3%	160	Consumer Products	4.1%		2,269
Flexible Plastic Packaging	0.1%	0.0%	29	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.1%	0.1%	48	Televisions - LCD	0.0%	0.0%	0
Metal	3.2%		1,806	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.2%	0.1%	134	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.3%	0.1%	152	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	0	Computers	0.0%	0.0%	0
Other Nonferrous	0.2%	0.3%	107	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.8%	0.4%	455	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	21	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.4%	0.3%	215	Other Consumer Electronics	0.2%	0.3%	84
R/C Metals	1.3%	0.8%	722	Textiles - Organic	2.0%	0.6%	1,114
Glass	2.6%		1,419	Textiles - Synthetic, Mixed, Unknown	1.2%	0.8%	641
Clear Glass Containers	1.0%	0.3%	558	Shoes, Purses, Belts	0.5%	0.4%	255
Green Glass Containers	0.5%	0.3%	279	Tires & Rubber	0.3%	0.3%	175
Brown Glass Containers	0.7%	0.5%	410	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.4%	172	Hazardous and Special Waste	1.9%		1,030
Organics	42.9%		23,860	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	10.7%	3.1%	5,930	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	12.0%	3.3%	6,693	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.0%	1.3%	1,135	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	4.5%	2.0%	2,506	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	3.1%	2.3%	1,721	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	1.6%	2.6%	868	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	8.3%	3.4%	4,595	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.7%	0.8%	412	Water Based Glues	0.0%	0.0%	0
Wood Wastes	1.1%		630	Oil-based Paint	0.0%	0.0%	10
Treated Wood	0.5%	0.4%	272	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	0.3%	0.4%	176	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.1%	0.2%	65	Varnish	0.0%	0.0%	0
Engineered Wood	0.0%	0.0%	14	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.1%	0.2%	81	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.0%	0.1%	22	Primers/Sealers	0.0%	0.0%	0
Construction Materials	0.7%		379	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	0
Insulation	0.0%	0.0%	0	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	5
Drywall	0.1%	0.2%	65	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.3%	0.3%	141	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.0%	0.0%	0	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.0%	0.0%	0	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	14	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.1%	0.2%	79	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.1%	0.2%	79	Explosives	0.0%	0.0%	0
Residues	9.4%		5,208	Medical Wastes	1.0%	1.1%	537
Disposable Diapers	9.1%	2.0%	5,055	Sharps	0.0%	0.0%	14
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.3%	0.4%	153	Personal Care Products	0.8%	1.1%	463
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			12	Totals	100%		55,609

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

Table 40: Northwest WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	3.0%		1,069	Paper Products	0.4%		157
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.0%	0.0%	0
Cardboard/Kraft Paper Packaging	2.6%	3.0%	945	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	0	Magazines	0.0%	0.0%	0
Mixed/Low Grade Paper Packaging	0.1%	0.1%	26	High-Grade Paper Products	0.0%	0.0%	0
Aseptic and Polycoat Packaging	0.0%	0.0%	0	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.0%	0.0%	10	Mixed Low Grade Paper Products	0.0%	0.0%	0
R/C Paper Packaging	0.2%	0.3%	88	Compostable Paper Products	0.0%	0.0%	13
Plastic Packaging	0.7%		250	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.1%	0.1%	20	R/C Paper Products	0.4%	0.7%	144
#1 PETE Plastic Non-bottles	0.0%	0.0%	0	Plastic Products	2.8%		1,022
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	3	#1 PETE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Colored Bottles	0.0%	0.1%	12	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.0%	0.0%	0	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.2%	0.3%	87	#6 PS Plastic Products	0.0%	0.0%	0
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	1.1%	1.7%	393
#7 Other Plastic Packaging	0.0%	0.0%	6	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.0%	0.0%	13	Plastic Garbage Bags	0.2%	0.1%	56
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.6%	0.9%	199
Plastic Merchandise Bags	0.0%	0.0%	0	Bulky Rigid Plastic Products	0.9%	1.2%	338
Non-industrial Packaging Film Plastic	0.2%	0.2%	72	R/C Plastic Products	0.1%	0.2%	35
Industrial Packaging Film Plastic	0.1%	0.1%	23	Consumer Products	0.6%		201
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.1%	14	Televisions - LCD	0.0%	0.0%	0
Metal	3.8%		1,385	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.0%	0.0%	4	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	0	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	0	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	6	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	0	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.7%	1.7%	611	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	2.1%	2.7%	764	Textiles - Organic	0.1%	0.1%	23
Glass	0.1%		35	Textiles - Synthetic, Mixed, Unknown	0.4%	0.6%	130
Clear Glass Containers	0.0%	0.0%	0	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.1%	0.2%	48
Brown Glass Containers	0.0%	0.0%	0	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.1%	0.2%	35	Hazardous and Special Waste	0.0%		0
Organics	0.0%		0	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.0%	0.0%	0	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.0%	0.0%	0	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	0	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.0%	0.0%	0	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	0.0%	0.0%	0	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.0%	0.0%	0	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	45.5%		16,467	Oil-based Paint	0.0%	0.0%	0
Treated Wood	15.2%	15.6%	5,489	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	8.9%	10.2%	3,227	Lacquer	0.0%	0.0%	0
Dimensional Lumber	12.5%	7.1%	4,511	Varnish	0.0%	0.0%	0
Engineered Wood	2.9%	2.7%	1,053	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	4.2%	6.9%	1,529	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	1.6%	2.5%	592	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.1%	14	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.1%	0.2%	51	Primers/Sealers	0.0%	0.0%	0
Construction Materials	43.1%		15,594	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.3%	0.3%	100	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	14.4%	13.2%	5,205	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	2.6%	4.2%	923	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	2.1%	3.1%	751	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	6.0%	9.9%	2,159	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	8.7%	14.4%	3,148	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.2%	0.3%	55	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.0%	0	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	9.0%	7.1%	3,253	Explosives	0.0%	0.0%	0
Residues	0.0%		0	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.0%	0.0%	0	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.0%	0.0%	0	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			11	Totals	100%		36,179

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

Table 41: Northwest WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	3.5%		1,346	Paper Products	3.2%		1,232
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.1%	0.1%	33
Cardboard/Kraft Paper Packaging	0.7%	0.5%	272	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.1%	0.1%	30	Magazines	0.0%	0.0%	0
Mixed/Low Grade Paper Packaging	1.8%	1.7%	672	High-Grade Paper Products	0.1%	0.2%	47
Aseptic and Polycoat Packaging	0.2%	0.2%	70	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.6%	0.9%	222	Mixed Low Grade Paper Products	0.9%	1.1%	358
R/C Paper Packaging	0.2%	0.2%	80	Compostable Paper Products	1.7%	2.1%	655
Plastic Packaging	2.3%		883	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.1%	0.1%	47	R/C Paper Products	0.4%	0.6%	139
#1 PETE Plastic Non-bottles	0.3%	0.3%	105	Plastic Products	7.8%		2,991
#2 HDPE Plastic Natural Bottles	0.3%	0.4%	109	#1 PETE Plastic Products	0.0%	0.1%	13
#2 HDPE Plastic Colored Bottles	0.1%	0.2%	53	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.0%	0.0%	3	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.2%	0.2%	75	#6 PS Plastic Products	0.0%	0.1%	14
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.2%	0.2%	60
#7 Other Plastic Packaging	0.0%	0.1%	17	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.1%	0.1%	28	Plastic Garbage Bags	0.8%	0.9%	294
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.1%	0.2%	45	Bulky Rigid Plastic Products	2.9%	2.7%	1,097
Non-industrial Packaging Film Plastic	1.0%	1.1%	386	R/C Plastic Products	3.9%	6.2%	1,513
Industrial Packaging Film Plastic	0.0%	0.0%	0	Consumer Products	23.8%		9,110
Flexible Plastic Packaging	0.0%	0.1%	14	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	0	Televisions - LCD	0.0%	0.0%	0
Metal	7.7%		2,968	Television Peripherals	0.8%	1.3%	295
Aluminum Beverage Cans	0.0%	0.0%	4	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.1%	27	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.5%	0.8%	180	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	0	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.2%	0.3%	78	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.3%	1.4%	886	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	4.7%	5.7%	1,793	Textiles - Organic	0.3%	0.4%	108
Glass	0.7%		266	Textiles - Synthetic, Mixed, Unknown	0.0%	0.0%	5
Clear Glass Containers	0.3%	0.4%	128	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.0%	0.0%	0
Brown Glass Containers	0.0%	0.1%	19	Furniture	16.0%	11.4%	6,118
Plate Glass	0.0%	0.0%	0	Mattresses	6.7%	10.6%	2,584
Stoneware/Kitchen Ceramics	0.3%	0.5%	119	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.0%	0.0%	0	Hazardous and Special Waste	0.1%		27
Organics	25.1%		9,610	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	1.0%	0.9%	385	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	3.1%	4.5%	1,174	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.0%	1.1%	381	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.7%	0.8%	266	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	9.5%	8.9%	3,639	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	8.4%	9.2%	3,217	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	1.4%	2.0%	522	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.1%	0.1%	27	Water Based Glues	0.0%	0.0%	0
Wood Wastes	2.4%		913	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.7%	1.2%	274	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	0.1%	0.1%	28	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.2%	0.4%	84	Varnish	0.0%	0.0%	0
Engineered Wood	0.1%	0.2%	53	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	1.2%	2.0%	474	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.0%	0.0%	0	Primers/Sealers	0.0%	0.0%	0
Construction Materials	21.3%		8,159	Stains	0.0%	0.0%	0
Natural Wood	4.5%	4.8%	1,715	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.1%	0.1%	34	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	2.8%	3.0%	1,089	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	0.9%	1.5%	349	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	2.1%	2.6%	821	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.1%	0.1%	25	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.0%	1.2%	366	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	9.8%	10.6%	3,761	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.0%	0.0%	0	Explosives	0.0%	0.0%	0
Residues	2.2%		839	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	2.2%	2.1%	839	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	8
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.0%	0.0%	0	Personal Care Products	0.0%	0.0%	1
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.1%	19
Sample Count			10	Totals	100%		38,343

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



Puget Sound Waste Generation Area Composition Tables

Table 42: Puget Sound WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	6.8%		166,901	Paper Products	7.2%		177,731
Newspaper Packaging	0.2%	0.2%	4,727	Newspaper	1.0%	0.4%	23,905
Cardboard/Kraft Paper Packaging	3.0%	0.8%	74,649	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.1%	0.0%	1,322	Magazines	0.2%	0.1%	4,601
Mixed/Low Grade Paper Packaging	1.4%	0.3%	34,055	High-Grade Paper Products	0.4%	0.3%	9,884
Aseptic and Polycoat Packaging	0.3%	0.2%	7,611	Other Groundwood Paper Products	0.0%	0.0%	221
Compostable Paper Packaging	1.2%	0.6%	28,881	Mixed Low Grade Paper Products	1.0%	0.4%	25,388
R/C Paper Packaging	0.6%	0.2%	15,656	Compostable Paper Products	3.9%	0.8%	97,150
Plastic Packaging	4.1%		101,179	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.3%	0.1%	8,386	R/C Paper Products	0.7%	0.3%	16,581
#1 PETE Plastic Non-bottles	0.5%	0.1%	11,805	Plastic Products	4.3%		104,924
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	4,364	#1 PETE Plastic Products	0.0%	0.0%	462
#2 HDPE Plastic Colored Bottles	0.2%	0.1%	4,400	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.1%	0.0%	1,666	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	47	#4 LDPE Plastic Products	0.0%	0.0%	9
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.1%	0.1%	1,365
#5 PP Plastic Packaging	0.2%	0.1%	5,577	#6 PS Plastic Products	0.0%	0.0%	639
#6 PS Plastic Packaging	0.0%	0.0%	835	#7 Other Plastic Products	0.6%	0.3%	13,738
#7 Other Plastic Packaging	0.1%	0.0%	3,591	PLA/Compostable Plastic Products	0.0%	0.0%	154
Expanded Polystyrene Packaging	0.3%	0.1%	6,987	Plastic Garbage Bags	1.6%	0.3%	39,001
PLA/Compostable Plastic Packaging	0.0%	0.0%	185	Non-bag Plastic Film Products	0.0%	0.0%	1,059
Plastic Merchandise Bags	0.3%	0.1%	7,146	Bulky Rigid Plastic Products	1.1%	0.5%	27,128
Non-industrial Packaging Film Plastic	1.5%	0.3%	36,988	R/C Plastic Products	0.9%	0.5%	21,368
Industrial Packaging Film Plastic	0.3%	0.2%	6,456	Consumer Products	6.5%		160,099
Flexible Plastic Packaging	0.0%	0.0%	1,028	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.1%	0.1%	1,719	Televisions - LCD	0.0%	0.0%	0
Metal	6.2%		152,116	Television Peripherals	0.1%	0.2%	2,659
Aluminum Beverage Cans	0.2%	0.1%	5,644	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	2,817	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	1,894	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.1%	3,217	Computer Peripherals	0.0%	0.1%	957
Food Cans - Tinned	0.4%	0.1%	9,101	Computer Printers	0.0%	0.0%	694
Food Cans - Coated	0.0%	0.0%	840	Audio Equipment	0.3%	0.6%	8,523
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.7%	1.6%	65,293	Other Consumer Electronics	0.3%	0.5%	6,910
R/C Metals	2.6%	1.4%	63,310	Textiles - Organic	2.1%	0.7%	51,358
Glass	2.3%		55,659	Textiles - Synthetic, Mixed, Unknown	2.4%	2.3%	58,077
Clear Glass Containers	0.8%	0.3%	19,303	Shoes, Purses, Belts	0.2%	0.2%	5,008
Green Glass Containers	0.1%	0.1%	3,177	Tires & Rubber	0.3%	0.3%	7,881
Brown Glass Containers	0.6%	0.4%	14,900	Furniture	0.4%	0.7%	10,521
Plate Glass	0.0%	0.0%	64	Mattresses	0.3%	0.5%	7,511
Stoneware/Kitchen Ceramics	0.1%	0.1%	1,665	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.7%	0.3%	16,551	Hazardous and Special Waste	1.3%		31,075
Organics	28.3%		697,709	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	6.5%	1.7%	159,445	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	6.5%	1.5%	159,594	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.5%	0.7%	61,375	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.4%	0.7%	58,264	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	4.7%	1.9%	116,992	Compact Fluorescent Lamps	0.0%	0.0%	47
Yard & Garden Waste - Prunings	0.3%	0.3%	7,824	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	3.9%	1.3%	95,416	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.1%	0.2%	3,332	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.3%	0.5%	7,496	Solvent-based Glues	0.0%	0.0%	74
R/C Organics	1.1%	0.5%	27,971	Water Based Glues	0.0%	0.0%	0
Wood Wastes	12.8%		316,364	Oil-based Paint	0.0%	0.0%	193
Treated Wood	0.8%	0.5%	20,116	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	3.2%	1.8%	79,235	Lacquer	0.0%	0.0%	0
Dimensional Lumber	1.6%	0.8%	40,275	Varnish	0.0%	0.0%	216
Engineered Wood	3.2%	2.5%	78,278	Urethane Coatings	0.0%	0.0%	173
Pallets & Crates	1.1%	1.3%	27,131	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.2%	0.1%	3,757	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.2%	0.3%	4,835	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	2.5%	2.2%	62,735	Primers/Sealers	0.0%	0.0%	0
Construction Materials	13.9%		342,694	Stains	0.0%	0.0%	0
Natural Wood	1.5%	2.2%	35,927	Water Repellants	0.1%	0.2%	2,458
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	0
Insulation	0.4%	0.3%	9,998	Solvents	0.0%	0.0%	120
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	556
Concrete	0.1%	0.2%	3,203	Dry-cell Batteries - Single Use	0.0%	0.0%	630
Drywall	1.0%	1.1%	24,948	Dry-cell Batteries - Rechargeable	0.0%	0.0%	5
Carpet	1.7%	1.7%	41,378	Wet-cell Batteries	0.0%	0.0%	58
Carpet Padding	1.3%	1.4%	32,411	Gasoline/Kerosene	0.0%	0.0%	72
Soil, Rocks, Sand	1.2%	0.9%	28,572	Motor Oil	0.0%	0.0%	368
Asphalt Roofing	4.7%	3.3%	116,920	Antifreeze	0.0%	0.0%	580
Plastic Flooring	0.3%	0.3%	7,161	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.7%	0.6%	18,377	Oil Filters	0.0%	0.0%	193
R/C Construction Materials	1.0%	1.1%	23,799	Explosives	0.0%	0.0%	0
Residues	6.4%		156,804	Medical Wastes	0.8%	0.9%	20,257
Disposable Diapers	5.8%	1.4%	144,027	Sharps	0.0%	0.0%	0
Ash	0.4%	0.3%	8,774	Pharmaceuticals/Vitamins	0.0%	0.0%	350
Dust	0.0%	0.0%	336	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.1%	0.1%	3,666	Personal Care Products	0.2%	0.2%	4,028
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	698
Sample Count			58	Totals	100%		2,463,256

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

Table 43: Puget Sound WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	8.5%		97,233	Paper Products	7.6%		87,483
Newspaper Packaging	0.4%	0.4%	4,682	Newspaper	0.6%	0.3%	6,436
Cardboard/Kraft Paper Packaging	3.5%	1.2%	39,733	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	424	Magazines	0.1%	0.1%	1,445
Mixed/Low Grade Paper Packaging	1.4%	0.5%	16,552	High-Grade Paper Products	0.6%	0.6%	6,590
Aseptic and Polycoat Packaging	0.5%	0.5%	6,147	Other Groundwood Paper Products	0.0%	0.0%	173
Compostable Paper Packaging	1.8%	1.3%	20,214	Mixed Low Grade Paper Products	1.4%	0.8%	16,321
R/C Paper Packaging	0.8%	0.5%	9,481	Compostable Paper Products	4.1%	1.4%	46,959
Plastic Packaging	4.4%		50,641	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.4%	0.1%	4,314	R/C Paper Products	0.8%	0.5%	9,558
#1 PETE Plastic Non-bottles	0.4%	0.2%	4,663	Plastic Products	4.3%		49,291
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	2,698	#1 PETE Plastic Products	0.0%	0.1%	462
#2 HDPE Plastic Colored Bottles	0.2%	0.0%	1,773	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	713	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	19	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.1%	0.1%	1,175
#5 PP Plastic Packaging	0.3%	0.2%	3,546	#6 PS Plastic Products	0.0%	0.0%	231
#6 PS Plastic Packaging	0.0%	0.0%	116	#7 Other Plastic Products	0.3%	0.2%	3,796
#7 Other Plastic Packaging	0.1%	0.0%	1,041	PLA/Compostable Plastic Products	0.0%	0.0%	154
Expanded Polystyrene Packaging	0.2%	0.1%	2,023	Plastic Garbage Bags	2.2%	0.5%	25,166
PLA/Compostable Plastic Packaging	0.0%	0.0%	96	Non-bag Plastic Film Products	0.0%	0.1%	424
Plastic Merchandise Bags	0.3%	0.1%	3,083	Bulky Rigid Plastic Products	0.5%	0.5%	5,222
Non-industrial Packaging Film Plastic	1.8%	0.6%	20,580	R/C Plastic Products	1.1%	1.1%	12,660
Industrial Packaging Film Plastic	0.4%	0.4%	4,201	Consumer Products	7.9%		90,797
Flexible Plastic Packaging	0.1%	0.0%	639	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.1%	0.1%	1,137	Televisions - LCD	0.0%	0.0%	0
Metal	8.8%		101,039	Television Peripherals	0.2%	0.4%	2,659
Aluminum Beverage Cans	0.2%	0.1%	2,274	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.1%	1,243	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	867	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.2%	1,330	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.5%	0.2%	5,183	Computer Printers	0.1%	0.1%	694
Food Cans - Coated	0.0%	0.0%	482	Audio Equipment	0.7%	1.2%	8,247
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	4.6%	3.4%	52,104	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	3.3%	2.7%	37,556	Textiles - Organic	1.1%	0.6%	13,026
Glass	2.5%		28,692	Textiles - Synthetic, Mixed, Unknown	4.0%	4.8%	45,244
Clear Glass Containers	0.7%	0.5%	7,631	Shoes, Purses, Belts	0.3%	0.3%	3,179
Green Glass Containers	0.2%	0.1%	2,177	Tires & Rubber	0.6%	0.6%	7,226
Brown Glass Containers	1.0%	0.7%	11,446	Furniture	0.9%	1.5%	10,521
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.1%	366	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.6%	0.4%	7,072	Hazardous and Special Waste	1.6%		18,261
Organics	30.2%		345,919	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	7.8%	3.4%	89,313	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	7.4%	2.6%	84,168	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	3.0%	1.0%	33,856	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	3.0%	1.4%	34,280	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	3.9%	2.7%	45,032	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.0%	0.0%	0	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	3.2%	2.3%	36,569	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.7%	1.1%	7,496	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	1.3%	0.7%	15,204	Water Based Glues	0.0%	0.0%	0
Wood Wastes	13.6%		155,600	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.6%	0.7%	7,284	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	2.6%	2.7%	29,386	Lacquer	0.0%	0.0%	0
Dimensional Lumber	1.6%	1.2%	18,499	Varnish	0.0%	0.0%	0
Engineered Wood	4.4%	4.8%	50,100	Urethane Coatings	0.0%	0.0%	173
Pallets & Crates	2.4%	2.7%	27,131	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.0%	0.0%	0	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	270	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	2.0%	2.1%	22,931	Primers/Sealers	0.0%	0.0%	0
Construction Materials	5.8%		66,556	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.6%	0.6%	6,340	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	77
Concrete	0.2%	0.3%	1,811	Dry-cell Batteries - Single Use	0.0%	0.0%	96
Drywall	0.6%	0.7%	6,629	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.0%	0.0%	0	Wet-cell Batteries	0.0%	0.0%	58
Carpet Padding	0.0%	0.0%	0	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.8%	1.8%	20,464	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.3%	0.5%	3,391	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.3%	0.5%	3,603	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.8%	1.0%	9,692	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	1.3%	2.1%	14,625	Explosives	0.0%	0.0%	0
Residues	4.6%		52,547	Medical Wastes	1.6%	1.9%	17,786
Disposable Diapers	4.1%	1.9%	46,979	Sharps	0.0%	0.0%	0
Ash	0.3%	0.5%	3,160	Pharmaceuticals/Vitamins	0.0%	0.0%	9
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.2%	0.2%	2,409	Personal Care Products	0.0%	0.0%	62
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count	25			Totals	100%		1,144,059

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

Table 44: Puget Sound WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	7.3%		49,159	Paper Products	11.1%		74,278
Newspaper Packaging	0.0%	0.0%	0	Newspaper	2.4%	1.4%	15,978
Cardboard/Kraft Paper Packaging	3.3%	1.8%	22,408	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.1%	0.1%	816	Magazines	0.5%	0.2%	3,119
Mixed/Low Grade Paper Packaging	1.9%	0.5%	13,051	High-Grade Paper Products	0.3%	0.2%	1,919
Aseptic and Polycoat Packaging	0.2%	0.1%	1,008	Other Groundwood Paper Products	0.0%	0.0%	48
Compostable Paper Packaging	1.1%	0.5%	7,293	Mixed Low Grade Paper Products	0.9%	0.6%	6,166
R/C Paper Packaging	0.7%	0.3%	4,582	Compostable Paper Products	6.4%	1.4%	43,065
Plastic Packaging	6.0%		40,077	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.5%	0.2%	3,551	R/C Paper Products	0.6%	0.5%	3,983
#1 PETE Plastic Non-bottles	0.9%	0.4%	6,262	Plastic Products	4.5%		30,109
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	1,583	#1 PETE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Colored Bottles	0.3%	0.2%	2,087	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	456	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	28	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	144
#5 PP Plastic Packaging	0.3%	0.1%	1,823	#6 PS Plastic Products	0.1%	0.0%	408
#6 PS Plastic Packaging	0.1%	0.1%	720	#7 Other Plastic Products	1.0%	1.0%	6,478
#7 Other Plastic Packaging	0.3%	0.1%	2,207	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.6%	0.2%	4,246	Plastic Garbage Bags	1.5%	0.4%	10,316
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.5%	0.1%	3,071	Bulky Rigid Plastic Products	1.4%	1.4%	9,477
Non-industrial Packaging Film Plastic	1.9%	0.4%	12,667	R/C Plastic Products	0.5%	0.3%	3,287
Industrial Packaging Film Plastic	0.1%	0.1%	744	Consumer Products	7.1%		47,444
Flexible Plastic Packaging	0.1%	0.0%	343	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.1%	288	Televisions - LCD	0.0%	0.0%	0
Metal	2.4%		15,876	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.4%	0.2%	2,855	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.2%	0.1%	1,499	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.2%	696	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	0	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.4%	0.2%	2,951	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	294	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.3%	0.2%	1,727	Other Consumer Electronics	1.0%	1.7%	6,910
R/C Metals	0.9%	0.7%	5,854	Textiles - Organic	4.5%	2.3%	29,965
Glass	3.1%		20,729	Textiles - Synthetic, Mixed, Unknown	1.3%	0.9%	8,914
Clear Glass Containers	1.4%	0.7%	9,669	Shoes, Purses, Belts	0.2%	0.4%	1,607
Green Glass Containers	0.1%	0.1%	576	Tires & Rubber	0.0%	0.0%	48
Brown Glass Containers	0.4%	0.3%	2,975	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.1%	0.1%	360	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	1.1%	0.7%	7,149	Hazardous and Special Waste	1.1%		7,624
Organics	41.2%		276,509	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	8.4%	1.9%	56,476	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	10.4%	3.0%	69,719	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	3.2%	1.4%	21,712	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.9%	1.0%	19,625	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	7.2%	3.7%	48,175	Compact Fluorescent Lamps	0.0%	0.0%	36
Yard & Garden Waste - Prunings	0.2%	0.2%	1,080	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	7.3%	2.3%	48,943	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	1.6%	1.0%	10,779	Water Based Glues	0.0%	0.0%	0
Wood Wastes	1.9%		12,742	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.6%	1.0%	3,959	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	0.6%	0.7%	4,007	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.4%	0.5%	2,354	Varnish	0.0%	0.1%	216
Engineered Wood	0.2%	0.3%	1,583	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.1%	0.2%	840	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.0%	0.0%	0	Primers/Sealers	0.0%	0.0%	0
Construction Materials	0.8%		5,446	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	120	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	0
Insulation	0.0%	0.0%	0	Solvents	0.0%	0.0%	120
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.2%	0.3%	1,392	Dry-cell Batteries - Single Use	0.1%	0.1%	495
Drywall	0.0%	0.0%	0	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.2%	0.2%	1,368	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.0%	0.0%	0	Gasoline/Kerosene	0.0%	0.0%	72
Soil, Rocks, Sand	0.2%	0.3%	1,392	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.0%	0	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.2%	0.3%	1,176	Explosives	0.0%	0.0%	0
Residues	13.5%		90,904	Medical Wastes	0.4%	0.6%	2,471
Disposable Diapers	12.6%	3.2%	84,354	Sharps	0.0%	0.0%	0
Ash	0.8%	0.9%	5,614	Pharmaceuticals/Vitamins	0.0%	0.0%	112
Dust	0.1%	0.1%	336	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.1%	0.1%	600	Personal Care Products	0.5%	0.8%	3,431
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.1%	0.1%	672
Sample Count			11	Totals	100%		670,896

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

Table 45: Puget Sound WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	1.6%		6,473	Paper Products	1.1%		4,530
Newspaper Packaging	0.0%	0.0%	45	Newspaper	0.0%	0.0%	0
Cardboard/Kraft Paper Packaging	1.3%	0.7%	5,217	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	0	Magazines	0.0%	0.0%	0
Mixed/Low Grade Paper Packaging	0.1%	0.2%	493	High-Grade Paper Products	0.1%	0.1%	463
Aseptic and Polycoat Packaging	0.0%	0.0%	15	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.0%	0.0%	30	Mixed Low Grade Paper Products	0.1%	0.2%	508
R/C Paper Packaging	0.2%	0.3%	673	Compostable Paper Products	0.2%	0.3%	747
Plastic Packaging	0.8%		3,356	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.0%	0.0%	135	R/C Paper Products	0.7%	1.1%	2,811
#1 PETE Plastic Non-bottles	0.0%	0.0%	135	Plastic Products	0.8%		3,075
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	0	#1 PETE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Colored Bottles	0.0%	0.1%	135	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.0%	0.0%	0	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	15	#6 PS Plastic Products	0.0%	0.0%	0
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.0%	0.0%	40
#7 Other Plastic Packaging	0.0%	0.1%	149	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.0%	0.0%	45	Plastic Garbage Bags	0.3%	0.5%	1,420
PLA/Compostable Plastic Packaging	0.0%	0.0%	15	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.1%	0.1%	366	Bulky Rigid Plastic Products	0.4%	0.7%	1,615
Non-industrial Packaging Film Plastic	0.3%	0.4%	1,136	R/C Plastic Products	0.0%	0.0%	0
Industrial Packaging Film Plastic	0.3%	0.2%	1,226	Consumer Products	0.0%		90
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	0	Televisions - LCD	0.0%	0.0%	0
Metal	4.7%		19,305	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.1%	0.1%	303	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	0	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	0	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.1%	314	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	0	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.8%	2.0%	7,550	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	2.7%	3.5%	11,138	Textiles - Organic	0.0%	0.0%	0
Glass	0.5%		2,093	Textiles - Synthetic, Mixed, Unknown	0.0%	0.0%	90
Clear Glass Containers	0.1%	0.2%	568	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.0%	0.0%	0
Brown Glass Containers	0.0%	0.0%	0	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.4%	0.6%	1,525	Hazardous and Special Waste	0.0%		0
Organics	2.6%		10,704	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.4%	0.6%	1,525	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.2%	0.3%	837	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	45	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.3%	0.4%	1,091	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	1.4%	2.3%	5,606	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.4%	0.6%	1,600	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	27.9%		114,022	Oil-based Paint	0.0%	0.0%	0
Treated Wood	1.8%	1.8%	7,355	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	6.9%	5.7%	28,300	Lacquer	0.0%	0.0%	0
Dimensional Lumber	3.8%	3.0%	15,428	Varnish	0.0%	0.0%	0
Engineered Wood	5.4%	7.5%	21,946	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.0%	0.0%	0	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	1.1%	1.8%	4,455	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	8.9%	11.7%	36,537	Primers/Sealers	0.0%	0.0%	0
Construction Materials	59.6%		243,576	Stains	0.0%	0.0%	0
Natural Wood	8.3%	13.4%	33,727	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	0
Insulation	0.8%	0.7%	3,244	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	3.9%	6.4%	16,101	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	7.1%	9.7%	29,122	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	7.9%	8.7%	32,411	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.6%	0.9%	2,317	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	27.8%	19.7%	113,528	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.9%	1.1%	3,558	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.4%	0.6%	1,570	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	2.0%	2.5%	7,998	Explosives	0.0%	0.0%	0
Residues	0.3%		1,286	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.2%	0.2%	628	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.2%	0.3%	658	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			12	Totals	100%		408,509

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

Table 46: Puget Sound WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	5.9%		14,036	Paper Products	4.8%		11,441
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.6%	1.0%	1,491
Cardboard/Kraft Paper Packaging	3.0%	1.9%	7,290	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	83	Magazines	0.0%	0.0%	37
Mixed/Low Grade Paper Packaging	1.7%	1.1%	3,958	High-Grade Paper Products	0.4%	0.4%	911
Aseptic and Polycoat Packaging	0.2%	0.2%	442	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.6%	0.5%	1,344	Mixed Low Grade Paper Products	1.0%	1.4%	2,393
R/C Paper Packaging	0.4%	0.3%	920	Compostable Paper Products	2.7%	2.3%	6,379
Plastic Packaging	3.0%		7,106	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.2%	0.1%	387	R/C Paper Products	0.1%	0.1%	230
#1 PETE Plastic Non-bottles	0.3%	0.2%	746	Plastic Products	9.4%		22,449
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	83	#1 PETE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Colored Bottles	0.2%	0.2%	405	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.2%	0.2%	497	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	9
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	46
#5 PP Plastic Packaging	0.1%	0.1%	193	#6 PS Plastic Products	0.0%	0.0%	0
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	1.4%	0.9%	3,424
#7 Other Plastic Packaging	0.1%	0.1%	193	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.3%	0.3%	672	Plastic Garbage Bags	0.9%	0.5%	2,099
PLA/Compostable Plastic Packaging	0.0%	0.1%	74	Non-bag Plastic Film Products	0.3%	0.3%	635
Plastic Merchandise Bags	0.3%	0.3%	626	Bulky Rigid Plastic Products	4.5%	3.0%	10,815
Non-industrial Packaging Film Plastic	1.1%	0.8%	2,605	R/C Plastic Products	2.3%	1.6%	5,421
Industrial Packaging Film Plastic	0.1%	0.1%	285	Consumer Products	9.1%		21,768
Flexible Plastic Packaging	0.0%	0.0%	46	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.1%	0.2%	295	Televisions - LCD	0.0%	0.0%	0
Metal	6.6%		15,897	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.1%	0.1%	212	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	75	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.2%	331	Computers	0.0%	0.0%	0
Other Nonferrous	0.7%	0.7%	1,574	Computer Peripherals	0.4%	0.7%	957
Food Cans - Tinned	0.4%	0.3%	966	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	64	Audio Equipment	0.1%	0.2%	276
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.6%	1.1%	3,912	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	3.7%	2.5%	8,762	Textiles - Organic	3.5%	2.8%	8,367
Glass	1.7%		4,146	Textiles - Synthetic, Mixed, Unknown	1.6%	1.3%	3,829
Clear Glass Containers	0.6%	0.5%	1,436	Shoes, Purses, Belts	0.1%	0.1%	221
Green Glass Containers	0.2%	0.2%	423	Tires & Rubber	0.3%	0.3%	607
Brown Glass Containers	0.2%	0.3%	479	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	64	Mattresses	3.1%	5.1%	7,511
Stoneware/Kitchen Ceramics	0.4%	0.5%	939	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.5%	804	Hazardous and Special Waste	2.2%		5,190
Organics	26.9%		64,577	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	5.1%	3.3%	12,131	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	2.0%	2.1%	4,869	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.4%	3.1%	5,762	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.4%	1.9%	3,267	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	7.6%	8.6%	18,178	Compact Fluorescent Lamps	0.0%	0.0%	11
Yard & Garden Waste - Prunings	2.1%	3.0%	5,145	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	4.1%	2.9%	9,904	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	1.4%	2.3%	3,332	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.1%	74
R/C Organics	0.8%	0.9%	1,988	Water Based Glues	0.0%	0.0%	0
Wood Wastes	14.2%		34,000	Oil-based Paint	0.1%	0.1%	193
Treated Wood	0.6%	0.7%	1,519	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	7.3%	8.4%	17,543	Lacquer	0.0%	0.0%	0
Dimensional Lumber	1.7%	1.4%	3,995	Varnish	0.0%	0.0%	0
Engineered Wood	1.9%	1.7%	4,648	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	1.2%	1.3%	2,918	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.1%	110	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.4%	1.5%	3,267	Primers/Sealers	0.0%	0.0%	0
Construction Materials	11.3%		27,116	Stains	0.0%	0.0%	0
Natural Wood	0.9%	1.2%	2,080	Water Repellants	1.0%	1.7%	2,458
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.2%	0.3%	414	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.2%	0.3%	479
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	38
Drywall	0.9%	1.1%	2,218	Dry-cell Batteries - Rechargeable	0.0%	0.0%	5
Carpet	4.5%	4.9%	10,889	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.0%	0.0%	0	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.8%	2.9%	4,400	Motor Oil	0.2%	0.3%	368
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.2%	0.4%	580
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	3.0%	4.3%	7,115	Oil Filters	0.1%	0.1%	193
R/C Construction Materials	0.0%	0.0%	0	Explosives	0.0%	0.0%	0
Residues	5.0%		12,067	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	5.0%	6.2%	12,067	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.1%	0.2%	230
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.0%	0.0%	0	Personal Care Products	0.2%	0.3%	535
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	26
Sample Count			10	Totals	100%		239,792

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



Southwest Waste Generation Area Composition Tables

Table 47: Southwest WGA Overall Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	8.3%		35,246	Paper Products	6.7%		28,408
Newspaper Packaging	0.2%	0.2%	817	Newspaper	0.5%	0.3%	2,296
Cardboard/Kraft Paper Packaging	2.5%	0.6%	10,646	Cardboard/Kraft Paper Products	0.6%	0.5%	2,393
Other Groundwood Paper Packaging	0.1%	0.0%	532	Magazines	0.3%	0.2%	1,346
Mixed/Low Grade Paper Packaging	2.9%	0.8%	12,486	High-Grade Paper Products	0.6%	0.2%	2,543
Aseptic and Polycoat Packaging	0.1%	0.0%	494	Other Groundwood Paper Products	0.0%	0.0%	117
Compostable Paper Packaging	1.5%	0.7%	6,311	Mixed Low Grade Paper Products	0.9%	0.3%	3,648
R/C Paper Packaging	0.9%	0.3%	3,961	Compostable Paper Products	3.0%	0.7%	12,652
Plastic Packaging	6.8%		28,895	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.6%	0.1%	2,710	R/C Paper Products	0.8%	0.5%	3,414
#1 PETE Plastic Non-bottles	0.4%	0.1%	1,858	Plastic Products	5.5%		23,485
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	840	#1 PETE Plastic Products	0.0%	0.0%	21
#2 HDPE Plastic Colored Bottles	0.2%	0.1%	903	#2 HDPE Plastic Products	0.0%	0.0%	5
#2 HDPE Plastic Jars & Tubs	0.3%	0.1%	1,134	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	22	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	18	#5 PP Plastic Products	0.0%	0.0%	50
#5 PP Plastic Packaging	0.2%	0.1%	1,053	#6 PS Plastic Products	0.0%	0.0%	175
#6 PS Plastic Packaging	0.0%	0.0%	114	#7 Other Plastic Products	0.8%	0.4%	3,576
#7 Other Plastic Packaging	0.1%	0.1%	532	PLA/Compostable Plastic Products	0.0%	0.0%	10
Expanded Polystyrene Packaging	0.3%	0.1%	1,272	Plastic Garbage Bags	1.5%	0.3%	6,529
PLA/Compostable Plastic Packaging	0.0%	0.0%	10	Non-bag Plastic Film Products	0.2%	0.2%	875
Plastic Merchandise Bags	0.3%	0.1%	1,394	Bulky Rigid Plastic Products	1.0%	0.4%	4,391
Non-industrial Packaging Film Plastic	1.7%	0.3%	7,144	R/C Plastic Products	1.9%	1.1%	7,853
Industrial Packaging Film Plastic	2.1%	1.1%	9,077	Consumer Products	10.1%		42,685
Flexible Plastic Packaging	0.1%	0.1%	384	Televisions - CRT	0.4%	0.5%	1,802
R/C Plastic Packaging	0.1%	0.1%	428	Televisions - LCD	0.0%	0.0%	0
Metal	7.3%		30,830	Television Peripherals	0.1%	0.2%	580
Aluminum Beverage Cans	0.3%	0.1%	1,179	Computer Monitors - CRT	0.3%	0.4%	1,228
Aluminum Foil/Containers	0.1%	0.0%	318	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.1%	463	Computers	0.0%	0.0%	31
Other Nonferrous	0.1%	0.1%	329	Computer Peripherals	0.0%	0.0%	58
Food Cans - Tinned	0.5%	0.1%	1,964	Computer Printers	0.5%	0.7%	2,100
Food Cans - Coated	0.0%	0.0%	120	Audio Equipment	0.0%	0.0%	0
White Goods	0.3%	0.4%	1,377	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.5%	1.0%	10,401	Other Consumer Electronics	0.2%	0.2%	800
R/C Metals	3.5%	1.2%	14,679	Textiles - Organic	2.3%	0.6%	9,553
Glass	3.5%		14,858	Textiles - Synthetic, Mixed, Unknown	1.4%	0.7%	6,136
Clear Glass Containers	0.5%	0.2%	2,300	Shoes, Purses, Belts	0.1%	0.1%	485
Green Glass Containers	0.4%	0.2%	1,644	Tires & Rubber	0.3%	0.2%	1,422
Brown Glass Containers	0.3%	0.1%	1,352	Furniture	2.5%	1.5%	10,458
Plate Glass	1.4%	1.7%	5,913	Mattresses	1.9%	1.2%	8,033
Stoneware/Kitchen Ceramics	0.0%	0.0%	120	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.8%	0.6%	3,530	Hazardous and Special Waste	1.4%		5,764
Organics	19.4%		82,350	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	4.1%	0.8%	17,237	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	5.0%	1.0%	21,199	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.3%	0.5%	5,612	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.4%	0.5%	6,079	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	4.3%	2.2%	18,162	Compact Fluorescent Lamps	0.0%	0.0%	4
Yard & Garden Waste - Prunings	0.4%	0.2%	1,817	Fluorescent Tubes	0.0%	0.0%	3
Animal Manure	2.4%	1.0%	10,196	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.2%	0.2%	679
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.5%	0.3%	2,047	Water Based Glues	0.0%	0.0%	8
Wood Wastes	12.9%		54,515	Oil-based Paint	0.0%	0.0%	5
Treated Wood	1.4%	1.4%	6,098	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	2.7%	1.2%	11,570	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.8%	1.4%	11,671	Varnish	0.0%	0.0%	0
Engineered Wood	1.9%	0.9%	8,086	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.9%	1.0%	7,972	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.8%	0.5%	3,420	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.3%	0.5%	1,384	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.0%	0.5%	4,314	Primers/Sealers	0.0%	0.0%	12
Construction Materials	13.7%		58,050	Stains	0.0%	0.0%	0
Natural Wood	0.1%	0.2%	577	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	94	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	27
Insulation	0.8%	0.8%	3,512	Solvents	0.0%	0.0%	0
Asphalt Paving	1.0%	1.1%	4,242	Caustic Cleaners	0.0%	0.0%	7
Concrete	1.2%	1.1%	5,183	Dry-cell Batteries - Single Use	0.0%	0.0%	65
Drywall	3.7%	1.6%	15,682	Dry-cell Batteries - Rechargeable	0.0%	0.0%	88
Carpet	1.6%	1.0%	6,738	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.7%	0.6%	2,893	Gasoline/Kerosene	0.0%	0.0%	11
Soil, Rocks, Sand	0.9%	0.6%	4,018	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	1.9%	1.4%	7,948	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.2%	0.2%	969	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.3%	0.3%	1,328	Oil Filters	0.0%	0.0%	140
R/C Construction Materials	1.1%	0.6%	4,866	Explosives	0.0%	0.0%	0
Residues	4.4%		18,522	Medical Wastes	0.9%	0.9%	3,922
Disposable Diapers	3.0%	0.9%	12,908	Sharps	0.0%	0.0%	4
Ash	1.2%	1.4%	4,950	Pharmaceuticals/Vitamins	0.0%	0.0%	11
Dust	0.1%	0.2%	466	Other Cleaners/Chemicals	0.1%	0.1%	313
Fines	0.0%	0.0%	199	Personal Care Products	0.1%	0.0%	277
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.1%	189
Sample Count	120			Totals	100%		423,608

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

Table 48: Southwest WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	11.2%		17,058	Paper Products	7.3%		11,190
Newspaper Packaging	0.2%	0.3%	355	Newspaper	0.4%	0.2%	617
Cardboard/Kraft Paper Packaging	3.8%	1.3%	5,852	Cardboard/Kraft Paper Products	0.6%	0.5%	953
Other Groundwood Paper Packaging	0.1%	0.0%	90	Magazines	0.2%	0.2%	272
Mixed/Low Grade Paper Packaging	3.5%	1.7%	5,331	High-Grade Paper Products	0.9%	0.5%	1,372
Aseptic and Polycoat Packaging	0.1%	0.1%	185	Other Groundwood Paper Products	0.0%	0.0%	37
Compostable Paper Packaging	1.9%	1.8%	2,893	Mixed Low Grade Paper Products	1.1%	0.6%	1,656
R/C Paper Packaging	1.5%	0.7%	2,352	Compostable Paper Products	3.5%	1.2%	5,374
Plastic Packaging	8.7%		13,342	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.3%	0.1%	526	R/C Paper Products	0.6%	0.4%	910
#1 PETE Plastic Non-bottles	0.3%	0.2%	506	Plastic Products	8.0%		12,224
#2 HDPE Plastic Natural Bottles	0.1%	0.1%	217	#1 PETE Plastic Products	0.0%	0.0%	17
#2 HDPE Plastic Colored Bottles	0.1%	0.1%	188	#2 HDPE Plastic Products	0.0%	0.0%	2
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	140	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	5	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	2	#5 PP Plastic Products	0.0%	0.0%	36
#5 PP Plastic Packaging	0.2%	0.1%	253	#6 PS Plastic Products	0.0%	0.0%	56
#6 PS Plastic Packaging	0.0%	0.0%	12	#7 Other Plastic Products	1.2%	0.9%	1,855
#7 Other Plastic Packaging	0.2%	0.2%	331	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.3%	0.2%	510	Plastic Garbage Bags	1.9%	0.8%	2,906
PLA/Compostable Plastic Packaging	0.0%	0.0%	10	Non-bag Plastic Film Products	0.1%	0.2%	170
Plastic Merchandise Bags	0.2%	0.1%	297	Bulky Rigid Plastic Products	1.0%	0.7%	1,496
Non-industrial Packaging Film Plastic	1.2%	0.5%	1,763	R/C Plastic Products	3.7%	2.9%	5,686
Industrial Packaging Film Plastic	5.4%	3.0%	8,233	Consumer Products	9.2%		14,051
Flexible Plastic Packaging	0.0%	0.0%	25	Televisions - CRT	1.0%	1.3%	1,466
R/C Plastic Packaging	0.2%	0.1%	324	Televisions - LCD	0.0%	0.0%	0
Metal	8.6%		13,206	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.2%	0.1%	247	Computer Monitors - CRT	0.5%	0.9%	837
Aluminum Foil/Containers	0.0%	0.0%	34	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.2%	0.2%	293	Computers	0.0%	0.0%	0
Other Nonferrous	0.2%	0.2%	246	Computer Peripherals	0.0%	0.0%	43
Food Cans - Tinned	0.3%	0.3%	511	Computer Printers	1.1%	1.9%	1,725
Food Cans - Coated	0.0%	0.0%	1	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	4.0%	2.4%	6,073	Other Consumer Electronics	0.2%	0.4%	377
R/C Metals	3.8%	2.2%	5,800	Textiles - Organic	1.2%	0.7%	1,897
Glass	1.8%		2,683	Textiles - Synthetic, Mixed, Unknown	1.7%	1.4%	2,545
Clear Glass Containers	0.3%	0.2%	492	Shoes, Purses, Belts	0.0%	0.0%	54
Green Glass Containers	0.0%	0.0%	22	Tires & Rubber	0.2%	0.2%	343
Brown Glass Containers	0.1%	0.1%	134	Furniture	3.1%	2.9%	4,763
Plate Glass	1.1%	1.7%	1,634	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.3%	0.2%	400	Hazardous and Special Waste	2.9%		4,485
Organics	10.6%		16,179	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	3.0%	1.2%	4,568	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	3.0%	1.4%	4,629	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.9%	0.5%	1,322	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.0%	0.8%	1,549	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	1.1%	0.8%	1,671	Compact Fluorescent Lamps	0.0%	0.0%	4
Yard & Garden Waste - Prunings	0.3%	0.3%	510	Fluorescent Tubes	0.0%	0.0%	1
Animal Manure	1.2%	1.7%	1,809	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.1%	70
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.1%	0.1%	122	Water Based Glues	0.0%	0.0%	0
Wood Wastes	15.6%		23,843	Oil-based Paint	0.0%	0.0%	5
Treated Wood	0.1%	0.1%	148	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	1.8%	1.4%	2,800	Lacquer	0.0%	0.0%	0
Dimensional Lumber	5.5%	3.4%	8,395	Varnish	0.0%	0.0%	0
Engineered Wood	1.4%	0.8%	2,098	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	4.1%	2.5%	6,341	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.2%	0.2%	348	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.9%	1.4%	1,384	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.5%	1.1%	2,329	Primers/Sealers	0.0%	0.0%	12
Construction Materials	12.8%		19,527	Stains	0.0%	0.0%	0
Natural Wood	0.3%	0.5%	433	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.1%	0.1%	94	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	27
Insulation	1.4%	2.0%	2,187	Solvents	0.0%	0.0%	0
Asphalt Paving	0.2%	0.3%	325	Caustic Cleaners	0.0%	0.0%	7
Concrete	1.2%	1.6%	1,885	Dry-cell Batteries - Single Use	0.0%	0.0%	6
Drywall	1.2%	1.1%	1,892	Dry-cell Batteries - Rechargeable	0.1%	0.1%	85
Carpet	0.6%	1.0%	959	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.8%	1.2%	1,248	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.6%	1.4%	2,449	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	2.5%	2.8%	3,834	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.6%	0.9%	914	Oil Filters	0.1%	0.1%	112
R/C Construction Materials	2.2%	1.5%	3,307	Explosives	0.0%	0.0%	0
Residues	3.3%		5,090	Medical Wastes	2.6%	2.4%	3,919
Disposable Diapers	1.0%	0.9%	1,548	Sharps	0.0%	0.0%	4
Ash	2.3%	3.7%	3,455	Pharmaceuticals/Vitamins	0.0%	0.0%	4
Dust	0.0%	0.0%	43	Other Cleaners/Chemicals	0.0%	0.0%	27
Fines	0.0%	0.0%	44	Personal Care Products	0.0%	0.0%	26
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.1%	0.2%	177
Sample Count	52			Totals	100%		152,877

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

Table 49: Southwest WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	9.5%		16,493	Paper Products	9.4%		16,307
Newspaper Packaging	0.3%	0.2%	462	Newspaper	1.0%	0.6%	1,671
Cardboard/Kraft Paper Packaging	2.1%	0.7%	3,653	Cardboard/Kraft Paper Products	0.8%	1.1%	1,440
Other Groundwood Paper Packaging	0.3%	0.1%	437	Magazines	0.6%	0.4%	1,060
Mixed/Low Grade Paper Packaging	4.0%	1.3%	6,844	High-Grade Paper Products	0.6%	0.4%	1,111
Aseptic and Polycoat Packaging	0.2%	0.1%	307	Other Groundwood Paper Products	0.0%	0.1%	59
Compostable Paper Packaging	2.0%	0.7%	3,400	Mixed Low Grade Paper Products	1.1%	0.6%	1,956
R/C Paper Packaging	0.8%	0.3%	1,390	Compostable Paper Products	4.1%	1.3%	7,140
Plastic Packaging	8.2%		14,145	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	1.2%	0.3%	2,092	R/C Paper Products	1.1%	1.1%	1,869
#1 PETE Plastic Non-bottles	0.8%	0.2%	1,319	Plastic Products	4.8%		8,380
#2 HDPE Plastic Natural Bottles	0.3%	0.1%	592	#1 PETE Plastic Products	0.0%	0.0%	3
#2 HDPE Plastic Colored Bottles	0.4%	0.1%	669	#2 HDPE Plastic Products	0.0%	0.0%	3
#2 HDPE Plastic Jars & Tubs	0.5%	0.3%	888	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	14	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	16	#5 PP Plastic Products	0.0%	0.0%	14
#5 PP Plastic Packaging	0.5%	0.1%	781	#6 PS Plastic Products	0.1%	0.0%	116
#6 PS Plastic Packaging	0.1%	0.1%	101	#7 Other Plastic Products	0.6%	0.3%	1,018
#7 Other Plastic Packaging	0.1%	0.0%	188	PLA/Compostable Plastic Products	0.0%	0.0%	9
Expanded Polystyrene Packaging	0.4%	0.1%	693	Plastic Garbage Bags	2.0%	0.4%	3,445
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.4%	0.5%	705
Plastic Merchandise Bags	0.6%	0.2%	1,064	Bulky Rigid Plastic Products	0.8%	0.8%	1,381
Non-industrial Packaging Film Plastic	3.0%	0.6%	5,223	R/C Plastic Products	1.0%	0.7%	1,687
Industrial Packaging Film Plastic	0.0%	0.0%	54	Consumer Products	9.0%		15,578
Flexible Plastic Packaging	0.2%	0.3%	358	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.1%	0.1%	92	Televisions - LCD	0.0%	0.0%	0
Metal	6.1%		10,505	Television Peripherals	0.3%	0.4%	457
Aluminum Beverage Cans	0.5%	0.2%	884	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.2%	0.1%	265	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	25	Computers	0.0%	0.0%	31
Other Nonferrous	0.0%	0.0%	0	Computer Peripherals	0.0%	0.0%	15
Food Cans - Tinned	0.8%	0.3%	1,398	Computer Printers	0.2%	0.4%	375
Food Cans - Coated	0.1%	0.1%	118	Audio Equipment	0.0%	0.0%	0
White Goods	0.4%	0.6%	668	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.1%	0.8%	1,875	Other Consumer Electronics	0.2%	0.3%	366
R/C Metals	3.0%	1.9%	5,271	Textiles - Organic	4.0%	1.3%	6,886
Glass	5.6%		9,753	Textiles - Synthetic, Mixed, Unknown	1.2%	0.8%	2,162
Clear Glass Containers	1.0%	0.4%	1,751	Shoes, Purses, Belts	0.2%	0.1%	361
Green Glass Containers	0.9%	0.5%	1,497	Tires & Rubber	0.4%	0.3%	696
Brown Glass Containers	0.6%	0.3%	1,122	Furniture	1.4%	2.2%	2,472
Plate Glass	2.4%	4.0%	4,223	Mattresses	1.0%	1.3%	1,756
Stoneware/Kitchen Ceramics	0.0%	0.0%	62	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.6%	0.5%	1,099	Hazardous and Special Waste	0.6%		1,037
Organics	36.0%		62,277	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	7.0%	1.5%	12,070	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	9.3%	2.2%	16,166	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.4%	1.1%	4,214	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.6%	0.9%	4,462	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	8.3%	4.9%	14,354	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.6%	0.5%	1,063	Fluorescent Tubes	0.0%	0.0%	2
Animal Manure	4.7%	2.0%	8,135	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.4%	0.6%	609
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	1.0%	0.7%	1,813	Water Based Glues	0.0%	0.0%	0
Wood Wastes	2.1%		3,659	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.2%	0.2%	335	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	0.4%	0.3%	699	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.2%	0.1%	327	Varnish	0.0%	0.0%	0
Engineered Wood	0.4%	0.4%	660	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.8%	1.0%	1,367	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.2%	0.2%	271	Primers/Sealers	0.0%	0.0%	0
Construction Materials	1.9%		3,366	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.0%	0.0%	0	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	58
Drywall	0.0%	0.0%	0	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.9%	1.0%	1,550	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.3%	0.4%	569	Gasoline/Kerosene	0.0%	0.0%	11
Soil, Rocks, Sand	0.5%	0.7%	894	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.2%	0.2%	341	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.0%	0.0%	11	Explosives	0.0%	0.0%	0
Residues	6.7%		11,625	Medical Wastes	0.0%	0.0%	3
Disposable Diapers	6.4%	2.1%	10,994	Sharps	0.0%	0.0%	0
Ash	0.1%	0.1%	113	Pharmaceuticals/Vitamins	0.0%	0.0%	2
Dust	0.2%	0.4%	423	Other Cleaners/Chemicals	0.1%	0.1%	99
Fines	0.1%	0.1%	96	Personal Care Products	0.1%	0.1%	242
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	11
Sample Count		25		Totals	100%		173,124

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

Table 50: Southwest WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	1.1%		547	Paper Products	1.2%		603
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.0%	0.0%	0
Cardboard/Kraft Paper Packaging	0.8%	0.6%	415	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	0	Magazines	0.0%	0.0%	0
Mixed/Low Grade Paper Packaging	0.0%	0.0%	0	High-Grade Paper Products	0.0%	0.0%	3
Aseptic and Polycoat Packaging	0.0%	0.0%	0	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.0%	0.0%	0	Mixed Low Grade Paper Products	0.0%	0.0%	0
R/C Paper Packaging	0.3%	0.3%	131	Compostable Paper Products	0.0%	0.0%	0
Plastic Packaging	1.6%		817	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.0%	0.0%	1	R/C Paper Products	1.2%	1.3%	600
#1 PETE Plastic Non-bottles	0.0%	0.0%	1	Plastic Products	0.8%		418
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	1	#1 PETE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Colored Bottles	0.0%	0.0%	0	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.2%	0.2%	84	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	0	#6 PS Plastic Products	0.0%	0.0%	0
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.0%	0.0%	10
#7 Other Plastic Packaging	0.0%	0.0%	0	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.0%	0.0%	5	Plastic Garbage Bags	0.0%	0.0%	3
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.0%	0.0%	0	Bulky Rigid Plastic Products	0.8%	1.1%	401
Non-industrial Packaging Film Plastic	0.0%	0.0%	0	R/C Plastic Products	0.0%	0.0%	4
Industrial Packaging Film Plastic	1.4%	1.9%	725	Consumer Products	1.5%		754
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	0	Televisions - LCD	0.0%	0.0%	0
Metal	2.7%		1,421	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.0%	0.0%	1	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	0	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.3%	0.3%	131	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.1%	27	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	0	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.9%	1.2%	483	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	1.5%	1.4%	779	Textiles - Organic	0.0%	0.1%	19
Glass	0.0%		0	Textiles - Synthetic, Mixed, Unknown	1.4%	2.3%	720
Clear Glass Containers	0.0%	0.0%	0	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.0%	0.0%	15
Brown Glass Containers	0.0%	0.0%	0	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.0%	0.0%	0	Hazardous and Special Waste	0.0%		0
Organics	0.0%		1	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.0%	0.0%	0	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.0%	0.0%	0	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	0	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.0%	0.0%	0	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	0.0%	0.0%	0	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.0%	0.0%	1	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	39.5%		20,444	Oil-based Paint	0.0%	0.0%	0
Treated Wood	10.2%	11.3%	5,281	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	13.0%	8.2%	6,724	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.2%	2.7%	1,133	Varnish	0.0%	0.0%	0
Engineered Wood	9.2%	7.1%	4,752	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.7%	2.1%	897	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.9%	0.8%	441	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	2.4%	2.1%	1,216	Primers/Sealers	0.0%	0.0%	0
Construction Materials	51.5%		26,633	Stains	0.0%	0.0%	0
Natural Wood	0.3%	0.5%	144	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	0
Insulation	2.4%	3.7%	1,247	Solvents	0.0%	0.0%	0
Asphalt Paving	7.6%	8.7%	3,917	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	25.7%	13.0%	13,263	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	5.3%	6.1%	2,714	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	1.4%	2.4%	738	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.4%	0.7%	222	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	7.3%	7.7%	3,758	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.7%	1.2%	369	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.1%	0.2%	73	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.4%	0.6%	188	Explosives	0.0%	0.0%	0
Residues	0.1%		59	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.0%	0.0%	0	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.1%	0.1%	59	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			23	Totals	100%		51,697

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

Table 51: Southwest WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	2.5%		1,148	Paper Products	0.7%		309
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.0%	0.0%	8
Cardboard/Kraft Paper Packaging	1.6%	1.0%	725	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	6	Magazines	0.0%	0.1%	14
Mixed/Low Grade Paper Packaging	0.7%	0.5%	311	High-Grade Paper Products	0.1%	0.1%	58
Aseptic and Polycoat Packaging	0.0%	0.0%	1	Other Groundwood Paper Products	0.0%	0.1%	20
Compostable Paper Packaging	0.0%	0.0%	18	Mixed Low Grade Paper Products	0.1%	0.1%	36
R/C Paper Packaging	0.2%	0.2%	88	Compostable Paper Products	0.3%	0.2%	137
Plastic Packaging	1.3%		591	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.2%	0.1%	91	R/C Paper Products	0.1%	0.1%	35
#1 PETE Plastic Non-bottles	0.1%	0.1%	32	Plastic Products	5.4%		2,463
#2 HDPE Plastic Natural Bottles	0.1%	0.0%	30	#1 PETE Plastic Products	0.0%	0.0%	1
#2 HDPE Plastic Colored Bottles	0.1%	0.1%	45	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.0%	0.1%	22	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	3	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	1	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	19	#6 PS Plastic Products	0.0%	0.0%	3
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	1.5%	1.6%	693
#7 Other Plastic Packaging	0.0%	0.0%	13	PLA/Compostable Plastic Products	0.0%	0.0%	1
Expanded Polystyrene Packaging	0.1%	0.1%	64	Plastic Garbage Bags	0.4%	0.3%	176
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.1%	0.0%	33	Bulky Rigid Plastic Products	2.4%	1.3%	1,112
Non-industrial Packaging Film Plastic	0.3%	0.2%	158	R/C Plastic Products	1.0%	1.2%	477
Industrial Packaging Film Plastic	0.1%	0.1%	66	Consumer Products	26.8%		12,303
Flexible Plastic Packaging	0.0%	0.0%	1	Televisions - CRT	0.7%	1.2%	336
R/C Plastic Packaging	0.0%	0.0%	13	Televisions - LCD	0.0%	0.0%	0
Metal	12.4%		5,699	Television Peripherals	0.3%	0.4%	123
Aluminum Beverage Cans	0.1%	0.1%	47	Computer Monitors - CRT	0.9%	1.4%	390
Aluminum Foil/Containers	0.0%	0.0%	18	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	14	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.2%	57	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.1%	0.1%	55	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	1	Audio Equipment	0.0%	0.0%	0
White Goods	1.5%	2.6%	709	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	4.3%	3.5%	1,970	Other Consumer Electronics	0.1%	0.2%	57
R/C Metals	6.2%	4.1%	2,829	Textiles - Organic	1.6%	1.2%	750
Glass	5.3%		2,422	Textiles - Synthetic, Mixed, Unknown	1.5%	1.0%	709
Clear Glass Containers	0.1%	0.2%	57	Shoes, Purses, Belts	0.2%	0.2%	70
Green Glass Containers	0.3%	0.4%	125	Tires & Rubber	0.8%	1.0%	368
Brown Glass Containers	0.2%	0.3%	96	Furniture	7.0%	6.4%	3,222
Plate Glass	0.1%	0.2%	57	Mattresses	13.7%	9.6%	6,277
Stoneware/Kitchen Ceramics	0.1%	0.2%	58	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	4.4%	5.5%	2,030	Hazardous and Special Waste	0.5%		242
Organics	8.5%		3,893	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	1.3%	1.5%	599	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.9%	0.8%	403	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.2%	0.2%	75	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.1%	0.2%	68	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	4.7%	7.2%	2,138	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.5%	0.4%	244	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.5%	0.5%	252	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.2%	0.2%	113	Water Based Glues	0.0%	0.0%	8
Wood Wastes	14.3%		6,570	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.7%	0.9%	334	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	2.9%	3.0%	1,348	Lacquer	0.0%	0.0%	0
Dimensional Lumber	4.0%	4.5%	1,815	Varnish	0.0%	0.0%	0
Engineered Wood	1.3%	1.2%	576	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.6%	2.6%	735	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	2.8%	1.8%	1,264	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.1%	1.2%	498	Primers/Sealers	0.0%	0.0%	0
Construction Materials	18.6%		8,524	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.2%	0.2%	79	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	7.2%	8.3%	3,298	Dry-cell Batteries - Single Use	0.0%	0.0%	1
Drywall	1.1%	1.6%	526	Dry-cell Batteries - Rechargeable	0.0%	0.0%	3
Carpet	3.3%	3.7%	1,514	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.7%	0.7%	338	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	1.0%	1.1%	454	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.8%	1.3%	356	Antifreeze	0.0%	0.0%	0
Plastic Flooring	1.3%	1.8%	600	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.0%	0	Oil Filters	0.1%	0.1%	28
R/C Construction Materials	3.0%	2.6%	1,360	Explosives	0.0%	0.0%	0
Residues	3.8%		1,748	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.8%	0.9%	366	Sharps	0.0%	0.0%	0
Ash	3.0%	5.0%	1,382	Pharmaceuticals/Vitamins	0.0%	0.0%	6
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.4%	0.7%	187
Fines	0.0%	0.0%	0	Personal Care Products	0.0%	0.0%	9
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			20	Totals	100%		45,911

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



West Waste Generation Area Composition Tables

Table 52: West WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	6.0%		10,049	Paper Products	9.5%		15,942
Newspaper Packaging	0.3%	0.3%	444	Newspaper	0.6%	0.4%	1,065
Cardboard/Kraft Paper Packaging	2.7%	0.7%	4,595	Cardboard/Kraft Paper Products	0.3%	0.2%	521
Other Groundwood Paper Packaging	0.1%	0.0%	129	Magazines	0.3%	0.1%	500
Mixed/Low Grade Paper Packaging	1.3%	0.4%	2,261	High-Grade Paper Products	0.4%	0.2%	687
Aseptic and Polycoat Packaging	0.2%	0.1%	303	Other Groundwood Paper Products	0.0%	0.1%	70
Compostable Paper Packaging	0.8%	0.3%	1,340	Mixed Low Grade Paper Products	1.3%	0.4%	2,231
R/C Paper Packaging	0.6%	0.2%	978	Compostable Paper Products	5.8%	1.7%	9,806
Plastic Packaging	5.0%		8,366	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.4%	0.1%	745	R/C Paper Products	0.6%	0.3%	1,061
#1 PETE Plastic Non-bottles	0.4%	0.1%	650	Plastic Products	5.0%		8,380
#2 HDPE Plastic Natural Bottles	0.1%	0.0%	214	#1 PETE Plastic Products	0.0%	0.0%	23
#2 HDPE Plastic Colored Bottles	0.2%	0.1%	310	#2 HDPE Plastic Products	0.1%	0.1%	146
#2 HDPE Plastic Jars & Tubs	0.2%	0.1%	394	#3 PVC Plastic Products	0.0%	0.0%	27
#3 PVC Plastic Packaging	0.0%	0.0%	16	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	1	#5 PP Plastic Products	0.1%	0.0%	91
#5 PP Plastic Packaging	0.3%	0.1%	421	#6 PS Plastic Products	0.1%	0.0%	108
#6 PS Plastic Packaging	0.0%	0.0%	33	#7 Other Plastic Products	0.6%	0.2%	1,014
#7 Other Plastic Packaging	0.1%	0.1%	245	PLA/Compostable Plastic Products	0.0%	0.0%	32
Expanded Polystyrene Packaging	0.4%	0.1%	603	Plastic Garbage Bags	1.6%	0.2%	2,662
PLA/Compostable Plastic Packaging	0.0%	0.0%	19	Non-bag Plastic Film Products	0.1%	0.1%	126
Plastic Merchandise Bags	0.3%	0.1%	463	Bulky Rigid Plastic Products	1.2%	0.5%	2,000
Non-industrial Packaging Film Plastic	1.5%	0.3%	2,505	R/C Plastic Products	1.3%	0.7%	2,149
Industrial Packaging Film Plastic	0.7%	0.4%	1,209	Consumer Products	12.5%		20,962
Flexible Plastic Packaging	0.0%	0.0%	39	Televisions - CRT	0.2%	0.3%	335
R/C Plastic Packaging	0.3%	0.2%	499	Televisions - LCD	0.0%	0.0%	0
Metal	5.0%		8,412	Television Peripherals	0.0%	0.0%	62
Aluminum Beverage Cans	0.3%	0.1%	453	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	173	Computer Monitors - LCD	0.1%	0.1%	122
Other Aluminum	0.1%	0.1%	153	Computers	0.0%	0.0%	22
Other Nonferrous	0.1%	0.1%	240	Computer Peripherals	0.0%	0.0%	4
Food Cans - Tinned	0.4%	0.1%	690	Computer Printers	0.1%	0.1%	156
Food Cans - Coated	0.1%	0.1%	138	Audio Equipment	0.0%	0.0%	32
White Goods	0.1%	0.1%	119	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.4%	0.6%	2,280	Other Consumer Electronics	0.2%	0.2%	347
R/C Metals	2.5%	1.2%	4,166	Textiles - Organic	2.8%	0.8%	4,757
Glass	1.7%		2,877	Textiles - Synthetic, Mixed, Unknown	1.7%	0.6%	2,886
Clear Glass Containers	0.6%	0.1%	973	Shoes, Purses, Belts	1.0%	0.7%	1,671
Green Glass Containers	0.2%	0.1%	283	Tires & Rubber	0.7%	0.4%	1,209
Brown Glass Containers	0.4%	0.1%	710	Furniture	2.6%	1.7%	4,436
Plate Glass	0.0%	0.0%	6	Mattresses	2.9%	1.9%	4,917
Stoneware/Kitchen Ceramics	0.2%	0.2%	374	R/C Consumer Products	0.0%	0.0%	4
R/C Glass	0.3%	0.2%	530	Hazardous and Special Waste	1.4%		2,284
Organics	22.3%		37,556	Pesticides	0.0%	0.0%	25
Edible Food - Vegetative	5.1%	1.0%	8,638	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	4.2%	0.8%	7,031	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	1.2%	0.5%	2,057	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.0%	0.7%	3,297	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	4.6%	1.8%	7,668	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.3%	0.2%	576	Fluorescent Tubes	0.0%	0.0%	5
Animal Manure	4.2%	1.0%	7,141	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	1	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.1%	0.2%	233
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.7%	0.2%	1,146	Water Based Glues	0.0%	0.0%	1
Wood Wastes	17.5%		29,479	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.7%	0.6%	1,163	Oil-based Clear Coatings	0.0%	0.0%	4
Painted Wood	4.8%	2.0%	8,087	Lacquer	0.0%	0.0%	0
Dimensional Lumber	2.6%	1.2%	4,425	Varnish	0.0%	0.0%	9
Engineered Wood	1.9%	0.8%	3,171	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	1.7%	1.0%	2,883	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	2.2%	1.6%	3,654	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	1.6%	1.6%	2,735	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	2.0%	1.0%	3,362	Primers/Sealers	0.0%	0.0%	0
Construction Materials	8.5%		14,217	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	15	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofer	0.0%	0.0%	0
Insulation	0.2%	0.2%	385	Solvents	0.0%	0.0%	3
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	3
Concrete	1.0%	0.9%	1,721	Dry-cell Batteries - Single Use	0.0%	0.0%	20
Drywall	1.5%	0.8%	2,563	Dry-cell Batteries - Rechargeable	0.0%	0.0%	8
Carpet	0.9%	0.5%	1,431	Wet-cell Batteries	0.0%	0.0%	31
Carpet Padding	0.4%	0.4%	676	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.2%	0.2%	356	Motor Oil	0.0%	0.1%	69
Asphalt Roofing	1.4%	1.1%	2,395	Antifreeze	0.0%	0.0%	35
Plastic Flooring	0.2%	0.1%	297	Other Vehicle Fluids	0.0%	0.0%	3
Ceramics & Brick	1.3%	1.3%	2,146	Oil Filters	0.0%	0.0%	12
R/C Construction Materials	1.3%	0.8%	2,233	Explosives	0.0%	0.0%	0
Residues	5.8%		9,719	Medical Wastes	1.0%	0.7%	1,607
Disposable Diapers	4.7%	0.9%	7,891	Sharps	0.0%	0.0%	6
Ash	0.1%	0.2%	243	Pharmaceuticals/Vitamins	0.0%	0.0%	9
Dust	0.1%	0.1%	144	Other Cleaners/Chemicals	0.0%	0.0%	40
Fines	0.9%	0.7%	1,441	Personal Care Products	0.1%	0.1%	130
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	30
Sample Count	106			Totals	100%		168,243

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

Table 53: West WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	7.3%		4,619	Paper Products	11.0%		6,968
Newspaper Packaging	0.1%	0.2%	64	Newspaper	0.2%	0.2%	105
Cardboard/Kraft Paper Packaging	4.2%	1.7%	2,677	Cardboard/Kraft Paper Products	0.6%	0.5%	394
Other Groundwood Paper Packaging	0.0%	0.0%	8	Magazines	0.2%	0.1%	104
Mixed/Low Grade Paper Packaging	1.0%	0.5%	627	High-Grade Paper Products	0.4%	0.3%	250
Aseptic and Polycoat Packaging	0.2%	0.2%	155	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	1.0%	0.7%	604	Mixed Low Grade Paper Products	0.9%	0.5%	558
R/C Paper Packaging	0.8%	0.4%	485	Compostable Paper Products	7.8%	4.4%	4,953
Plastic Packaging	5.7%		3,594	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.4%	0.2%	234	R/C Paper Products	1.0%	0.7%	604
#1 PETE Plastic Non-bottles	0.3%	0.2%	188	Plastic Products	4.7%		2,982
#2 HDPE Plastic Natural Bottles	0.2%	0.1%	115	#1 PETE Plastic Products	0.0%	0.0%	4
#2 HDPE Plastic Colored Bottles	0.2%	0.2%	138	#2 HDPE Plastic Products	0.1%	0.1%	57
#2 HDPE Plastic Jars & Tubs	0.4%	0.3%	243	#3 PVC Plastic Products	0.0%	0.0%	7
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.1%	0.1%	66
#5 PP Plastic Packaging	0.1%	0.1%	75	#6 PS Plastic Products	0.0%	0.0%	25
#6 PS Plastic Packaging	0.0%	0.1%	23	#7 Other Plastic Products	0.5%	0.3%	319
#7 Other Plastic Packaging	0.2%	0.1%	96	PLA/Compostable Plastic Products	0.0%	0.0%	13
Expanded Polystyrene Packaging	0.3%	0.2%	209	Plastic Garbage Bags	1.6%	0.5%	992
PLA/Compostable Plastic Packaging	0.0%	0.0%	18	Non-bag Plastic Film Products	0.1%	0.1%	47
Plastic Merchandise Bags	0.1%	0.0%	53	Bulky Rigid Plastic Products	1.1%	0.8%	727
Non-industrial Packaging Film Plastic	1.2%	0.5%	740	R/C Plastic Products	1.1%	0.8%	725
Industrial Packaging Film Plastic	1.7%	1.0%	1,054	Consumer Products	12.8%		8,146
Flexible Plastic Packaging	0.0%	0.0%	5	Televisions - CRT	0.5%	0.9%	335
R/C Plastic Packaging	0.6%	0.5%	403	Televisions - LCD	0.0%	0.0%	0
Metal	4.2%		2,659	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.2%	0.1%	124	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	26	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	4	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	25	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.2%	0.1%	146	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	11	Audio Equipment	0.0%	0.0%	0
White Goods	0.1%	0.1%	53	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.9%	0.7%	585	Other Consumer Electronics	0.4%	0.5%	234
R/C Metals	2.7%	3.0%	1,685	Textiles - Organic	2.0%	1.2%	1,243
Glass	0.6%		366	Textiles - Synthetic, Mixed, Unknown	1.7%	1.4%	1,052
Clear Glass Containers	0.3%	0.1%	160	Shoes, Purses, Belts	1.1%	1.7%	725
Green Glass Containers	0.0%	0.0%	16	Tires & Rubber	0.7%	0.6%	463
Brown Glass Containers	0.2%	0.1%	112	Furniture	2.6%	3.2%	1,677
Plate Glass	0.0%	0.0%	2	Mattresses	3.8%	3.9%	2,416
Stoneware/Kitchen Ceramics	0.1%	0.1%	34	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.1%	0.1%	41	Hazardous and Special Waste	2.1%		1,350
Organics	15.3%		9,739	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	4.6%	1.6%	2,942	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	3.2%	1.3%	2,017	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.9%	0.5%	545	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.9%	1.3%	1,235	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	1.8%	1.5%	1,145	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.4%	0.5%	280	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	2.2%	1.4%	1,399	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.3%	0.2%	174	Water Based Glues	0.0%	0.0%	0
Wood Wastes	27.2%		17,264	Oil-based Paint	0.0%	0.0%	0
Treated Wood	1.6%	1.4%	1,031	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	7.3%	4.7%	4,618	Lacquer	0.0%	0.0%	0
Dimensional Lumber	3.5%	2.4%	2,193	Varnish	0.0%	0.0%	0
Engineered Wood	2.6%	1.5%	1,667	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	2.9%	2.2%	1,835	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	3.7%	3.7%	2,365	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	3.9%	4.3%	2,469	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.7%	0.9%	1,087	Primers/Sealers	0.0%	0.0%	0
Construction Materials	6.1%		3,846	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.3%	0.3%	189	Solvents	0.0%	0.0%	3
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.0%	0.0%	0	Dry-cell Batteries - Single Use	0.0%	0.0%	7
Drywall	1.3%	1.5%	842	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.4%	0.6%	255	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.1%	0.2%	80	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.3%	0.4%	179	Motor Oil	0.1%	0.2%	69
Asphalt Roofing	0.5%	0.9%	333	Antifreeze	0.1%	0.1%	35
Plastic Flooring	0.1%	0.2%	70	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	1.3%	1.5%	821	Oil Filters	0.0%	0.0%	12
R/C Construction Materials	1.7%	1.3%	1,075	Explosives	0.0%	0.0%	0
Residues	3.2%		2,005	Medical Wastes	1.9%	1.7%	1,188
Disposable Diapers	2.6%	1.6%	1,637	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.6%	0.7%	368	Personal Care Products	0.0%	0.0%	7
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.1%	29
Sample Count			38	Totals	100%		63,539

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

Table 54: West WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	6.2%		4,330	Paper Products	11.5%		8,050
Newspaper Packaging	0.5%	0.6%	380	Newspaper	1.3%	0.9%	908
Cardboard/Kraft Paper Packaging	1.7%	0.6%	1,201	Cardboard/Kraft Paper Products	0.2%	0.2%	116
Other Groundwood Paper Packaging	0.1%	0.1%	105	Magazines	0.5%	0.2%	329
Mixed/Low Grade Paper Packaging	2.0%	0.8%	1,402	High-Grade Paper Products	0.5%	0.4%	383
Aseptic and Polycoat Packaging	0.2%	0.1%	132	Other Groundwood Paper Products	0.0%	0.0%	7
Compostable Paper Packaging	1.0%	0.4%	679	Mixed Low Grade Paper Products	1.8%	0.8%	1,282
R/C Paper Packaging	0.6%	0.3%	431	Compostable Paper Products	6.6%	1.1%	4,630
Plastic Packaging	6.0%		4,206	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.7%	0.2%	460	R/C Paper Products	0.6%	0.3%	395
#1 PETE Plastic Non-bottles	0.6%	0.2%	439	Plastic Products	5.7%		4,022
#2 HDPE Plastic Natural Bottles	0.1%	0.0%	91	#1 PETE Plastic Products	0.0%	0.0%	19
#2 HDPE Plastic Colored Bottles	0.2%	0.1%	165	#2 HDPE Plastic Products	0.0%	0.1%	31
#2 HDPE Plastic Jars & Tubs	0.2%	0.1%	131	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	16	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	1	#5 PP Plastic Products	0.0%	0.0%	22
#5 PP Plastic Packaging	0.5%	0.2%	329	#6 PS Plastic Products	0.1%	0.1%	80
#6 PS Plastic Packaging	0.0%	0.0%	10	#7 Other Plastic Products	0.6%	0.4%	417
#7 Other Plastic Packaging	0.2%	0.1%	131	PLA/Compostable Plastic Products	0.0%	0.0%	17
Expanded Polystyrene Packaging	0.3%	0.1%	245	Plastic Garbage Bags	2.1%	0.4%	1,476
PLA/Compostable Plastic Packaging	0.0%	0.0%	1	Non-bag Plastic Film Products	0.1%	0.1%	60
Plastic Merchandise Bags	0.5%	0.1%	379	Bulky Rigid Plastic Products	0.9%	0.4%	617
Non-industrial Packaging Film Plastic	2.3%	0.4%	1,624	R/C Plastic Products	1.8%	1.6%	1,283
Industrial Packaging Film Plastic	0.1%	0.1%	55	Consumer Products	8.6%		6,024
Flexible Plastic Packaging	0.0%	0.0%	33	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.1%	0.1%	95	Televisions - LCD	0.0%	0.0%	0
Metal	4.8%		3,382	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.5%	0.2%	322	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.2%	0.1%	136	Computer Monitors - LCD	0.2%	0.3%	122
Other Aluminum	0.2%	0.2%	120	Computers	0.0%	0.0%	0
Other Nonferrous	0.1%	0.1%	76	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.6%	0.2%	420	Computer Printers	0.2%	0.3%	128
Food Cans - Coated	0.2%	0.2%	127	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.9%	0.8%	652	Other Consumer Electronics	0.0%	0.0%	15
R/C Metals	2.2%	1.0%	1,528	Textiles - Organic	4.5%	1.6%	3,164
Glass	2.9%		2,056	Textiles - Synthetic, Mixed, Unknown	2.0%	0.7%	1,430
Clear Glass Containers	0.9%	0.3%	662	Shoes, Purses, Belts	0.9%	0.7%	598
Green Glass Containers	0.3%	0.1%	200	Tires & Rubber	0.5%	0.4%	331
Brown Glass Containers	0.7%	0.2%	512	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.3%	0.6%	236
Stoneware/Kitchen Ceramics	0.4%	0.4%	290	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.6%	0.5%	392	Hazardous and Special Waste	1.2%		834
Organics	35.3%		24,775	Pesticides	0.0%	0.1%	25
Edible Food - Vegetative	7.2%	1.7%	5,059	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	6.8%	1.6%	4,784	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	2.0%	1.0%	1,412	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	2.7%	1.1%	1,912	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	8.1%	4.0%	5,671	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.1%	0.2%	104	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	7.2%	2.0%	5,058	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	1	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.3%	0.5%	231
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	1.1%	0.5%	775	Water Based Glues	0.0%	0.0%	1
Wood Wastes	3.2%		2,250	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.0%	0.0%	0	Oil-based Clear Coatings	0.0%	0.0%	4
Painted Wood	0.2%	0.2%	162	Lacquer	0.0%	0.0%	0
Dimensional Lumber	0.1%	0.1%	64	Varnish	0.0%	0.0%	9
Engineered Wood	1.2%	1.1%	876	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.0%	0.0%	0	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.1%	0.1%	54	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.3%	0.4%	194	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.3%	1.4%	900	Primers/Sealers	0.0%	0.0%	0
Construction Materials	4.5%		3,135	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	5	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.3%	0.4%	176	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	0.4%	0.7%	303	Dry-cell Batteries - Single Use	0.0%	0.0%	12
Drywall	0.8%	0.7%	590	Dry-cell Batteries - Rechargeable	0.0%	0.0%	7
Carpet	0.4%	0.5%	250	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.0%	0.0%	17	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.0%	0.0%	20	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.1%	0.1%	43	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.3%	0.3%	187	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	1.8%	2.9%	1,246	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.4%	0.7%	298	Explosives	0.0%	0.0%	0
Residues	10.2%		7,124	Medical Wastes	0.6%	0.5%	420
Disposable Diapers	8.4%	1.6%	5,868	Sharps	0.0%	0.0%	6
Ash	0.2%	0.3%	139	Pharmaceuticals/Vitamins	0.0%	0.0%	1
Dust	0.2%	0.3%	115	Other Cleaners/Chemicals	0.1%	0.1%	39
Fines	1.4%	1.6%	1,002	Personal Care Products	0.1%	0.1%	77
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	1
Sample Count			22	Totals	100%		70,187

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

Table 55: West WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	1.5%		211	Paper Products	1.6%		221
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.0%	0.0%	0
Cardboard/Kraft Paper Packaging	1.1%	1.0%	156	Cardboard/Kraft Paper Products	0.1%	0.1%	11
Other Groundwood Paper Packaging	0.0%	0.0%	0	Magazines	0.2%	0.3%	23
Mixed/Low Grade Paper Packaging	0.4%	0.3%	55	High-Grade Paper Products	0.2%	0.2%	25
Aseptic and Polycoat Packaging	0.0%	0.0%	0	Other Groundwood Paper Products	0.4%	0.7%	57
Compostable Paper Packaging	0.0%	0.0%	0	Mixed Low Grade Paper Products	0.6%	0.9%	83
R/C Paper Packaging	0.0%	0.0%	0	Compostable Paper Products	0.0%	0.0%	1
Plastic Packaging	0.3%		45	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.0%	0.0%	1	R/C Paper Products	0.2%	0.2%	21
#1 PETE Plastic Non-bottles	0.0%	0.0%	0	Plastic Products	1.2%		169
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	0	#1 PETE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Colored Bottles	0.0%	0.0%	0	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	7	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	0	#6 PS Plastic Products	0.0%	0.0%	0
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.2%	0.2%	32
#7 Other Plastic Packaging	0.0%	0.0%	2	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.0%	0.0%	1	Plastic Garbage Bags	0.2%	0.2%	33
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	0
Plastic Merchandise Bags	0.0%	0.0%	1	Bulky Rigid Plastic Products	0.7%	0.9%	103
Non-industrial Packaging Film Plastic	0.0%	0.0%	3	R/C Plastic Products	0.0%	0.0%	1
Industrial Packaging Film Plastic	0.2%	0.4%	30	Consumer Products	2.0%		277
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	0	Televisions - LCD	0.0%	0.0%	0
Metal	4.6%		640	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.0%	0.0%	2	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	0	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.0%	0.0%	1	Computers	0.0%	0.0%	0
Other Nonferrous	0.2%	0.4%	33	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	3	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.1%	0.1%	10
White Goods	0.5%	0.8%	66	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	1.3%	1.0%	183	Other Consumer Electronics	0.5%	0.9%	75
R/C Metals	2.5%	2.9%	353	Textiles - Organic	0.2%	0.3%	29
Glass	0.1%		16	Textiles - Synthetic, Mixed, Unknown	1.2%	1.8%	163
Clear Glass Containers	0.0%	0.0%	3	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	0.0%	0.0%	0
Brown Glass Containers	0.0%	0.0%	0	Furniture	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.1%	0.1%	13	Hazardous and Special Waste	0.0%		5
Organics	0.3%		44	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.1%	0.1%	9	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.0%	0.0%	0	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	0	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.0%	0.0%	0	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	0.0%	0.0%	0	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.3%	0.4%	35	Fluorescent Tubes	0.0%	0.1%	5
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	56.8%		7,958	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.5%	0.6%	70	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	21.6%	11.5%	3,030	Lacquer	0.0%	0.0%	0
Dimensional Lumber	13.5%	10.0%	1,890	Varnish	0.0%	0.0%	0
Engineered Wood	3.5%	2.8%	485	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	0.4%	0.6%	55	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	8.1%	9.5%	1,132	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	0	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	9.2%	8.2%	1,295	Primers/Sealers	0.0%	0.0%	0
Construction Materials	31.5%		4,408	Stains	0.0%	0.0%	0
Natural Wood	0.1%	0.1%	10	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.0%	0.0%	0	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	3.7%	4.5%	520	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	5.1%	4.7%	720	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	2.2%	2.5%	307	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.0%	0.0%	0	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.5%	0.8%	65	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	14.2%	12.2%	1,993	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.1%	0.2%	19	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	5.5%	6.0%	776	Explosives	0.0%	0.0%	0
Residues	0.1%		21	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.0%	0.0%	0	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.1%	0.2%	21	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count			21	Totals	100%		14,016

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

Table 56: West WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper Packaging	4.3%		889	Paper Products	3.4%		702
Newspaper Packaging	0.0%	0.0%	0	Newspaper	0.3%	0.2%	52
Cardboard/Kraft Paper Packaging	2.7%	1.5%	562	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.1%	0.1%	16	Magazines	0.2%	0.2%	44
Mixed/Low Grade Paper Packaging	0.9%	0.6%	176	High-Grade Paper Products	0.1%	0.1%	29
Aseptic and Polycoat Packaging	0.1%	0.1%	16	Other Groundwood Paper Products	0.0%	0.0%	5
Compostable Paper Packaging	0.3%	0.2%	56	Mixed Low Grade Paper Products	1.5%	0.9%	308
R/C Paper Packaging	0.3%	0.3%	62	Compostable Paper Products	1.1%	0.7%	222
Plastic Packaging	2.5%		521	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.2%	0.2%	50	R/C Paper Products	0.2%	0.2%	41
#1 PETE Plastic Non-bottles	0.1%	0.1%	23	Plastic Products	5.9%		1,207
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	7	#1 PETE Plastic Products	0.0%	0.0%	1
#2 HDPE Plastic Colored Bottles	0.0%	0.0%	7	#2 HDPE Plastic Products	0.3%	0.5%	58
#2 HDPE Plastic Jars & Tubs	0.1%	0.0%	12	#3 PVC Plastic Products	0.1%	0.2%	20
#3 PVC Plastic Packaging	0.0%	0.0%	0	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	1	#5 PP Plastic Products	0.0%	0.0%	3
#5 PP Plastic Packaging	0.1%	0.1%	17	#6 PS Plastic Products	0.0%	0.0%	3
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	1.2%	1.1%	246
#7 Other Plastic Packaging	0.1%	0.1%	16	PLA/Compostable Plastic Products	0.0%	0.0%	2
Expanded Polystyrene Packaging	0.7%	0.5%	147	Plastic Garbage Bags	0.8%	0.4%	161
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.1%	0.2%	19
Plastic Merchandise Bags	0.1%	0.1%	31	Bulky Rigid Plastic Products	2.7%	2.9%	554
Non-industrial Packaging Film Plastic	0.7%	0.3%	138	R/C Plastic Products	0.7%	0.5%	141
Industrial Packaging Film Plastic	0.3%	0.4%	70	Consumer Products	31.8%		6,516
Flexible Plastic Packaging	0.0%	0.0%	2	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	0	Televisions - LCD	0.0%	0.0%	0
Metal	8.4%		1,731	Television Peripherals	0.3%	0.4%	62
Aluminum Beverage Cans	0.0%	0.0%	5	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	11	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.2%	29	Computers	0.1%	0.2%	22
Other Nonferrous	0.5%	0.5%	105	Computer Peripherals	0.0%	0.0%	4
Food Cans - Tinned	0.6%	0.5%	121	Computer Printers	0.1%	0.2%	28
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.1%	0.2%	22
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	4.2%	3.6%	860	Other Consumer Electronics	0.1%	0.1%	23
R/C Metals	2.9%	1.6%	601	Textiles - Organic	1.6%	0.8%	322
Glass	2.1%		438	Textiles - Synthetic, Mixed, Unknown	1.2%	0.7%	240
Clear Glass Containers	0.7%	0.5%	147	Shoes, Purses, Belts	1.7%	2.3%	349
Green Glass Containers	0.3%	0.3%	66	Tires & Rubber	2.0%	2.0%	416
Brown Glass Containers	0.4%	0.3%	87	Furniture	13.5%	10.2%	2,759
Plate Glass	0.0%	0.0%	4	Mattresses	11.1%	10.0%	2,266
Stoneware/Kitchen Ceramics	0.2%	0.2%	51	R/C Consumer Products	0.0%	0.0%	4
R/C Glass	0.4%	0.3%	84	Hazardous and Special Waste	0.5%		95
Organics	14.6%		2,999	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	3.1%	1.8%	628	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	1.1%	0.7%	230	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.5%	0.3%	100	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.7%	0.6%	150	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	4.2%	4.4%	852	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.8%	0.8%	157	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	3.3%	2.1%	684	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.0%	0	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.0%	0.0%	2
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	1.0%	0.6%	197	Water Based Glues	0.0%	0.0%	0
Wood Wastes	9.8%		2,007	Oil-based Paint	0.0%	0.0%	0
Treated Wood	0.3%	0.5%	62	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	1.3%	0.9%	277	Lacquer	0.0%	0.0%	0
Dimensional Lumber	1.4%	1.0%	279	Varnish	0.0%	0.0%	0
Engineered Wood	0.7%	1.2%	142	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	4.8%	4.7%	993	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.5%	0.7%	103	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.4%	0.4%	72	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	0.4%	0.4%	80	Primers/Sealers	0.0%	0.0%	0
Construction Materials	13.8%		2,827	Stains	0.0%	0.0%	0
Natural Wood	0.0%	0.0%	0	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.1%	0.2%	19	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	3
Concrete	4.4%	6.6%	898	Dry-cell Batteries - Single Use	0.0%	0.0%	1
Drywall	2.0%	2.5%	412	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	3.0%	3.2%	619	Wet-cell Batteries	0.2%	0.2%	31
Carpet Padding	2.8%	3.3%	579	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.5%	0.7%	92	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.1%	0.2%	26	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.2%	0.3%	41	Other Vehicle Fluids	0.0%	0.0%	3
Ceramics & Brick	0.3%	0.5%	60	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	0.4%	0.6%	83	Explosives	0.0%	0.0%	0
Residues	2.8%		568	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	1.9%	1.3%	386	Sharps	0.0%	0.0%	0
Ash	0.5%	0.6%	104	Pharmaceuticals/Vitamins	0.0%	0.1%	8
Dust	0.1%	0.2%	29	Other Cleaners/Chemicals	0.0%	0.0%	1
Fines	0.2%	0.2%	50	Personal Care Products	0.2%	0.4%	46
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count	25			Totals	100%		20,501

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

Appendix E: Supplemental Composition Results

This section presents waste composition results for the supplemental statewide analysis. The supplemental analysis generated statewide findings that incorporated recent studies conducted by King, Pierce, Thurston, and Clark Counties and the Cities of Seattle and Tacoma with data collected in the ten-county statewide study. Not every one of the additional studies completed by local governments and used for this supplemental analysis distinguished between self-hauled C&D and self-hauled other waste sectors. Therefore, samples from those sectors have been combined into a single self-hauled sector for the supplemental analysis.

Statewide data are presented for the state overall and for each waste sector (commercial, residential, and self-hauled) in three ways:

1. A bar chart presents an overview of waste composition by material class.
2. A table shows the ten most prevalent *material types*, by weight.
3. A detailed table lists the full composition and quantity results for the 36 *material types*. Because each study used a different list of *material types* for sorting—and none of the seven used the same list as the 2015-2016 statewide study—the list of 156 original *material types* has been merged into a list of 36 materials compatible with all studies.

The data from the following list of studies were combined for this analysis:

- 2015-2016 King County Waste Characterization Study (study excludes Seattle)
- 2012 Clark County Waste Characterization Study
- 2014 Thurston County Waste Characterization Study
- 2011 Seattle Commercial and Self-haul Material Characterization Study
- 2015-2016 Seattle Residential Waste Characterization Study
- 2014 City of Tacoma Waste Characterization Study
- 2015-2016 Pierce County Waste Characterization Study (study excludes Tacoma)

To combine the existing composition data from the studies listed above with data collected in the ten sampled counties, Cascadia needed to merge, or “roll-up,” eight different material lists. Each study used a unique list of materials and grouped individual materials differently, so many materials had to be merged into broader categories.

The first column of Table 57 shows these 36 “rolled up” *material types*. The remaining columns show the relationships between the material list used in the supplemental analysis list (36 materials), the material lists used in the statewide study (156 materials), and the material lists used in the supplemental studies.

For example, the level of detail for the *food* material types—four material types in the statewide, King County, and Pierce County study, two in the City of Seattle and City of Tacoma studies, and a single category for Thurston and Clark Counties—found in the eight studies vary enough that the detailed material types had to be “rolled up” until a comparison between studies was made possible. In this example, the only level of detail contained in all eight studies was *food*. There are, of course, exceptions to the “rolling up” method. Several material types are of great interest when solid waste planning and were detailed in most, but not all, of the supplemental studies. Those materials are detailed in the tables even though we are missing

composition data from one or more studies with those materials. The materials are detailed in the supplemental analysis even though they weren't detailed in each of the supplemental studies are:

- Textiles and Clothing,
- Disposable Diapers,
- Tires and Rubber,
- Furniture,
- Mattresses, and
- Animal Excrement

For each of these materials, when calculating the compositions for the supplemental analysis, the composition estimate is based on sampling data from the studies that detailed the material. Sampling data from the studies that didn't detail the material are excluded from the composition calculations for that material.

For example, *disposable diapers* is detailed in every one of the supplemental studies except the Clark County study. Thus, the *disposable diapers* composition estimate is based on the sampling data from all studies except the Clark County study.

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Table 57: Supplemental Statewide Results—Eight-Study Material Type Translation

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County
Paper								
1	Newspaper	Newspaper Products	Newspaper (ONP)	Newspaper	Newspaper	Newspaper	Newspaper	Newspaper
		Newspaper Packaging						
2	Corrugated Cardboard	Cardboard/Kraft Products	Plain Corrugated Cardboard (OCC)	Cardboard	Cardboard	Plain OCC/Kraft	Plain OCC/Kraft	Uncoated OCC/Kraft Paper
		Cardboard/Kraft Packaging						
3	Mixed Grade Paper	High-grade Papers	High Grade Paper	Mixed Waste Paper	Mixed Waste Paper	Grocery/Shopping Bags	Grocery/Shopping Bags	High-grade Paper
		Magazines	Low Grade Recyclable Paper	Milk Cartons, Other	Phone Books	High-grade Paper	High-grade Paper	Low-grade Paper
		Mixed/Low Grade Packaging			Milk Cartons, Other	Mixed Low-grade Paper	Mixed Low-grade Paper	
		Mixed Low Grade Paper Products				Polycoated Containers	Polycoated Containers	
		Aseptic and Polycoat Packaging						
		Groundwood Products						
		Other Groundwood Packaging						
4	Compostable Paper	Compostable Paper Packaging	Waxed Corrugated Cardboard (OCC)	Food-Soiled Paper	Compostable Paper	Waxed OCC	Waxed OCC	Waxed OCC
		Compostable Paper Products	Single Use Food Service Compostable Paper			Potentially Compostable Single-use Food Service	Potentially Compostable Single-use Food Service	Pizza Boxes
			Other Compostable Paper			Compostable/Soiled	Compostable/Soiled	Compostable/Soiled Paper
								Potentially Compostable Single-use Food Service
5	Remainder/Composite Paper	R/C Paper Products	Other Paper	Other, Non-Recyclable	Other, Non-Recyclable Paper	Non-Compostable. Single-use Food Service	Non-Compostable. Single-use Food Service	Non-Compostable. Single-use Food Service Paper
		R/C Paper Packaging				Mixed/Other Paper	Mixed/Other Paper	R/C Paper
		Paper Processing Sludge						

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County	
Plastic									
6	#1 PET Bottles	#1 PET Bottles	PET Bottles	PET Bottles	PET Bottles	#1 PET Bottles	#1 PET Bottles	#1 PET Bottles	Pop and Water Bottles (#1)
7	#2 HDPE Bottles	#2 HDPE Colored Bottles	HDPE Bottles	HDPE Bottles	HDPE Bottles	#2 HDPE Natural Bottles	#2 HDPE Natural Bottles	#2 HDPE Bottles	All other Bottle & Jugs (#2)
		#2 HDPE Natural Bottles				#2 HDPE Colored Bottles	#2 HDPE Colored Bottles		
8	Plastic Bags and Film	Plastic Garbage Bags	Plastic Film Products	Film and Bags	Carryout Bags	Shopping/Dry Cleaning Bags	Shopping/Dry Cleaning Bags	Clean Shopping/Dry Cleaning Bags	Plastic Shopping Bags
		Plastic Merchandise Bags	Plastic Garbage Bags		Other Film and Bags	Stretch Wrap	Stretch Wrap	Other Clean PE Film	Plastic Film
		Non-bag Plastic Film Products	Recyclable Plastic Bags			Clean Polyethylene Film	Clean Polyethylene Film	Other Film	
		Flexible Plastic Packaging	Non-industrial Packaging Film Plastic			Other Film	Other Film		
		Industrial Plastic Packaging Film	Industrial Packaging Film Plastic						
		Non-industrial Plastic Packaging Film							

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County
9 Remainder/ Composite Plastics	R/C Plastic Packaging	Other Plastic Packaging	Other Plastics	Expanded Polystyrene	Plastic/Other Materials	Plastic/Other Materials	Expanded Polystyrene Food grade	Non-Compatible Other Plastics
	R/C Plastic Products	Plastic and Other Materials	Expanded Polystyrene	Plastic Products	Expanded Polystyrene Food grade	Expanded Polystyrene Food grade	Expanded Polystyrene Non-food Grade	Styrofoam
	Expanded Polystyrene Packaging	Other Expanded Polystyrene Packaging	Bottle Types 3 - 7	Bottle Types 3 - 7	Expanded Polystyrene Non-food Grade	Expanded Polystyrene Non-food Grade	Pot. Comp. Single-use Food Service Plastic	Compatible Plastic Containers
	PLA/Compostable Product	Expanded Polystyrene Single-serve Food Packaging	Tubs	Tubs	Non-compostable Single-use Food Service Plastic	Non-compostable Single-use Food Service Plastic	Non-compostable Single-use Food Service Plastic	
	PLA/Compostable Packaging	Expanded Polystyrene Products	Recyclable Packaging	Plastic Packaging	Potentially Compostable Single-use Food Service	Potentially Compostable Single-use Food Service	Durable Plastic Products	
	#1 PET Product	Compostable Plastics			Durable Plastic Products	Durable Plastic Products	R/C Plastics	
	#2 HDPE Product	Single Resin Plastic Products			Plastic Pipe	Plastic Pipe	#1-#7 Other Containers	
	#3 PVC Product	Mixed Resin Plastic Products			Other Bottles	Other Bottles		
	#4 LDPE Product	Other HDPE Containers			Tubs	Tubs		
	#5 PP Product	Other PET Containers			Other Rigid Packaging	Other Rigid Packaging		
	#6 PS Product	Other #3-#7 Packaging						
	#7 Other Product							
	Bulky Rigid Plastic Products							
	#1 PET Non-bottles							
	#2 HDPE Jars & Tubs							
	#3 PVC Packaging							
	#4 LDPE Packaging							
	#5 PP Packaging							
	#6 PS Packaging							
#7 Other Packaging								

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County	
Glass									
10	Glass Bottles and Containers	Clear Glass Containers	Clear Glass Containers	Clear Glass	Clear Glass	Clear Bottles	Clear Bottles	Clear Glass Containers	Clear Glass
		Green Glass Containers	Green Glass Containers	Green Glass	Green Glass	Green Bottles	Green Bottles	Green Glass Containers	Brown Glass
		Brown Glass Containers	Brown Glass Containers	Brown Glass	Brown Glass	Brown Bottles	Brown Bottles	Brown Glass Containers	Green Glass
						Container Glass	Container Glass		
11	Remainder/Composite Glass	Plate Glass	Other Glass	Non-Recyclable Glass	Light Bulbs	Flat Glass	Flat Glass	Plate Glass	Other Glass
		R/C Glass	Compact Fluorescent Bulbs		Non-Recyclable Glass	Automotive Glass	Automotive Glass	R/C Glass	Fluorescent Light Tubes & Compacts
		Compact Fluorescent Lamps	Other Fluorescent Bulbs/Tubes			Other Glass	Other Glass	Fluorescent Lighting	
		Fluorescent Tubes				Fluorescent Tubes	Fluorescent Tubes		
						Compact Fluorescent Bulbs	Compact Fluorescent Bulbs		
Metal									
12	Aluminum Cans	Aluminum Beverage Cans	Aluminum Cans	Aluminum Cans	Aluminum Cans	Aluminum Beverage Cans	Aluminum Beverage Cans	Aluminum Beverage Cans	Aluminum Cans
13	Tin Cans	Food Cans - Coated	Tinned Food Cans	Tin Cans	Tin Cans	Steel Food Cans	Steel Food Cans	Tin Food Cans	Steel Cans
		Food Cans - Tinned							
14	Other Ferrous Metals	Other Ferrous Metal	Other Ferrous	Ferrous Metals	Ferrous Metals	Other Ferrous	Other Ferrous	Empty Aerosol Cans	Aerosol Cans
					Aerosol Cans	Empty Aerosol Cans	Empty Aerosol Cans	Other Ferrous	Other Ferrous Metals
15	Other Non-Ferrous Metals	Other Non-ferrous Metal	Other Non-Ferrous	Non-Ferrous Metals	Non-Ferrous Metals	Other Nonferrous	Other Nonferrous	Aluminum Foil/Containers	Other Non-Ferrous Metals
		Aluminum Foil/Containers	Other Aluminum		Aluminum Foil	Aluminum Foil/Containers	Aluminum Foil/Containers	Other Non-ferrous	
		Other Aluminum				Other Aluminum	Other Aluminum		
16	Remainder/Composite Metals	R/C Metal	Mixed Metals (items <20% non-metal)	Mixed Metals	Mixed Metal	Mixed Metals/Material	Mixed Metals/Material	R/C Metal	Large Appliances
		White Goods	Compressed Gas Cylinders		White Goods			Major Appliances	
			Other Mixed Metals (items >20% non-metal)						

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County	
Organics									
17	Food	Edible Food - Meat, Fats, Oils	Packaged Non-vegetative Food	Food Wastes	Food	Food	Food	Food Waste, Vegetative	Food Waste: Edible/Program Compatible
		Edible Food - Vegetative	Packaged Vegetative Food			Fats, Oils, Grease	Fats, Oils, Grease	Other Food Waste	Food Waste: Edible/Non-Compatible
		Inedible Food - Meats, Fats, Oils	Unpackaged/Scrap Non-vegetative Food						Food Waste: Inedible/Compatible
		Inedible Food - Vegetative	Unpackaged/Scrap Vegetative Food						Food Waste: Inedible/Non-Compatible
18	Green Waste	Yard & Garden Waste, Leaves & Grass	Yard Waste	Yard, Garden	Yard Debris	Leaves and Grass	Leaves and Grass	Leaves and Grass	Yard Waste
		Yard & Garden Waste, Prunings	Large Prunings			Prunings	Prunings	Prunings and Trimmings	
		Crop Residues							
		Fruit Waste							
Wood Waste									
19	Lumber and Pallets	Dimensional Lumber	Dimensional Lumber	Clean Wood	Dimension Lumber	Clean Dimension Lumber	Clean Dimension Lumber	Dimensional Lumber	Untreated Lumber
		Engineered Wood	Other Wood	Other Wood	Pallets	Clean Engineered Wood	Clean Engineered Wood	Pallets and Crates	Pallets
		Other Untreated Wood		Hog Fuel	Plywood	Pallets	Pallets	Engineered Wood	
		Pallets & Crates			Particle Board	Crates	Crates		
					Wood Products				
					Other Wood Waste				
20	Remainder/Composite Wood	R/C Wood	Contaminated Wood	Contaminated Wood	Contaminated	Contaminated Wood	Contaminated Wood	Painted Wood	Treated Wood Waste
		Wood By-Products	Roofing and Siding Wood	Roofing (Wood)	Treated Wood	New Painted Wood	New Painted Wood	Treated Wood	
		Painted Wood	Treated Wood		Wood Roofing	Old Painted Wood	Old Painted Wood	R/C Wood	
		Treated Wood				Creosote-treated Wood	Creosote-treated Wood		
						Other Treated Wood	Other Treated Wood		

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County	
Construction Materials									
21	Asphalt Roofing	Asphalt Roofing	Asphalt Shingles	Roofing	Asphalt Roofing	Asphalt Shingles	Asphalt Shingles	Asphalt Shingles	Asphalt Roofing
						Other Asphaltic Roofing	Other Asphaltic Roofing	Other Asphalt Roofing	
22	Drywall	Drywall	Gypsum Wallboard	Gypsum Board	Gypsum Board	New Gypsum Scrap	New Gypsum Scrap	Clean Drywall	Gypsum Wallboard
						Demo Gypsum Scrap	Demo Gypsum Scrap	Other Drywall	
23	Carpet & Carpet Padding	Carpet	Carpet	Carpet and Padding	Carpet	Carpet	Carpet	Carpet	Carpet
		Carpet Padding	Carpet Padding		Carpet Padding	Felt Carpet Pad	Felt Carpet Pad	Carpet Padding	
			Foam Rubber and Padding			Foam Carpet Padding	Foam Carpet Padding		
24	Natural Wood	Natural Wood	Stumps	Natural Wood	Stumps/Other Bulky	Other Untreated Wood	Other Untreated Wood	Other Untreated Wood	Land Clearing Debris
								Branches and Stumps	
25	Other C&D	Asphalt Paving	C&D Wastes	Rubble	Ceramics, Porcelain, China	Fiberglass Insulation	Fiberglass Insulation	Concrete	Concrete
		Ceramics & Brick	Kitchenware/Ceramics		Rocks, Brick	Concrete	Concrete	Asphalt Paving	Insulation
		Concrete			Concrete	Asphalt Paving	Asphalt Paving	Insulation	Other Construction Debris
		Insulation			Fiberglass Insulation	Other Aggregates	Other Aggregates	Ceramics and Brick	Asphalt
		Plastic Flooring			Other Fiberglass	Rock	Rock	R/C Construction	
		Plastic Lumber			Asphalt	Single-ply Roofing Membranes	Single-ply Roofing Membranes		
		R/C Construction			Other C&D	Ceramics	Ceramics		
		Non-glass Ceramics				Cement Fiber Board	Cement Fiber Board		
						Ceiling Tiles	Ceiling Tiles		
						Other Construction	Other Construction		
				Rigid Polystyrene. Foam Insulation	Rigid Polystyrene. Foam Insulation				

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County	
Consumer Products									
26	Textiles and Clothing	Shoes, Purses, Belts	Other Textiles	This study did not include this material	Textiles	Textiles/Clothing	Textiles/Clothing	Textiles and Clothing	Textiles and Leather
		Textiles - Organic	Textiles: Clothes			Mixed Textiles	Mixed Textiles		
		Textiles - Synthetic, Mixed, Unknown							
27	Tires and Rubber	Tires & Rubber	Tires	This study did not include this material	Tires	Rubber Products	Rubber Products	Tires	Tires
			Rubber Products			Rubber Products	Tires	Tires	
28	Furniture	Furniture	Furniture	This study did not include this material	Furniture	Furniture	Furniture	Furniture	Furniture/Bulky
29	Mattresses	Mattresses	Mattresses	This study did not include this material	Mattresses	Mattresses	Mattresses	Mattresses	Mattresses/Box Springs
30	E-Waste	Television Peripherals	A/V Equipment	E-Wastes	E-Waste	Cell Phones	Cell Phones	Televisions and CRTs	E-Cycle Products
		Televisions - CRT	Cell Phones		Other Electronics	Audio/Visual Equipment	Audio/Visual Equipment	Computers and Flat Monitors	All Other E-Waste
		Televisions - LCD	Computer Peripherals			CRT Monitors	CRT Monitors	Computer Peripherals	Small Appliances
		Audio Equipment	CPU's			CRT Televisions	CRT Televisions	Other Consumer Electronics	
		Computer Monitors - CRT	CRT Computer Monitors & Televisions			Other Electronics	Other Electronics		
		Computer Monitors - LCD	Laptops			Small Appliances	Small Appliances		
		Computer Peripherals	Other Computer Monitors & Televisions						
		Computer Printers	Other Electronics						
		Computers	Printers/Copiers/Fax Machines						
		Electronic Gaming Equipment	Small Household Appliances						
		Other Consumer Electronics	Tablets						

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County	
Other Materials									
31	Disposable Diapers	Disposable Diapers	Disposable Diapers	This study did not include this material	Diapers	Disposable Diapers	Disposable Diapers	Disposable Diapers	
32	Animal Excrement	Animal Manure	Animal Feces	Animal Excrement	Animal Excrement	Animal By-products	Animal By-products	Animal Excrement/Litter	This study did not include this material
33	Medical/Pharmaceutical Waste	Medical Wastes	Medical Waste	Medical Wastes	Medical Wastes	Medical Wastes	Medical Wastes	Medical Wastes	Medical Waste
		Pharmaceuticals/Vitamins	Pharmaceuticals and Vitamins		Pharmaceuticals		Pharmaceuticals/Vitamins	Pharmaceuticals	Medicine (Rx Only)
		Sharps							
34	Household Batteries	Dry-cell Batteries - Rechargeable	Household Batteries	Household Batteries	Batteries, Household	Rechargeable Batteries	Rechargeable Batteries	Dry-cell Batteries	Alkaline Batteries
		Dry-cell Batteries - Single Use				Other Dry-cell Batteries	Other Dry-cell Batteries		Other Batteries
35	Other Hazardous Wastes	Gasoline/Kerosene	Gasoline and Fuel Oil	Hazardous Wastes	Gasoline, Fuel Oil	Gasoline/Kerosene	Gasoline/Kerosene	Oil filters	Paints/Adhesives
		Antifreeze	Antifreeze/Brake Fluid		Motor Oil	Motor Oil/Diesel Oil	Motor Oil/Diesel Oil	Pesticides and Herbicides	Cleaners
		Motor Oil	Used Oil		Antifreeze	Dried Latex Paint	Dried Latex Paint	Asbestos	Pesticides/Herbicides
		Oil Filters	Vehicle Batteries		Other Auto Maintenance	Liquid Latex Paint	Liquid Latex Paint	Paints, Solvents, and Adhesives	Vehicle & Equipment Fluids
		Oil-based Clear Coatings	Latex Paint		Oil Filters	Oil-based Paint/Thinners	Oil-based Paint/Thinners	Wet-cell Batteries	Car Batteries
		Oil-based Paint	Oil-based Paint		Batteries, Car	Solvent-based Adhesives	Solvent-based Adhesives	Gasoline/Kerosene	Gasoline
		Solvents	Solvents and Thinners		Latex Paint	Water-based Adhesives	Water-based Adhesives	Motor Oil	Explosives
		Solvent-based Glues	Adhesives and Glue		Oil-Based Paint	Pesticides/Herbicides	Pesticides/Herbicides	Vehicle and Equipment Fluids	Other Hazardous Waste
		Water Based Glues	Pesticides and Herbicides		Solvents	Caustic Cleaners	Caustic Cleaners	House Cleaners and Chemicals	
		Fungicides	Cleaners and Corrosives		Adhesives, Glues	Other Cleaners/Chemicals	Other Cleaners/Chemicals	Other Potentially Hazardous	
		Herbicides	Other Hazardous Waste		Fertilizers w/Pesticides	Wet-cell Batteries	Wet-cell Batteries		
		Pesticides			Pesticides, Herbicides	Asbestos	Asbestos		
		Caustic Cleaners			Cleaners, Corrosives	Explosives	Explosives		
		Other Cleaners/Chemicals			Fertilizers w/o Pesticides	Other Potentially Harmful Waste	Other Potentially Harmful Waste		
		Asbestos			Other Hazardous/ Special Wastes	Oil filters	Oil filters		
Concrete/Masonry/Wood Waterproofers			Actual Hazardous Wastes						

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

Supplemental Analysis (rolled-up)	2015-2016 Statewide Study	King County	Clark County	Thurston County	City of Seattle (Com/Self-haul)	City of Seattle (Residential)	City of Tacoma	Pierce County	
35	Other Hazardous Wastes	Deck Coatings/Floor Paint			Gas Cylinders				
		Explosives							
		Fertilizers							
		Field/Lawn Markings							
		HID Lamps							
		Lacquer							
		Other Potentially Hazardous Waste							
		Other Vehicle Fluids							
		Personal Care Products							
		Primers/Sealers							
		Rust Preventive Coatings							
		Stains							
		Urethane Coatings							
		UV/Germicidal Lamps							
		Varnish							
		Water Based Paints							
Water Repellants									
Wet-cell Batteries									
36	Other Materials	Ash	Ash	Garbage	Ash, Dust	Sand/Soil/Dirt	Sand/Soil/Dirt	Non-distinct Fines	All Other Waste
		Dust	Miscellaneous Inorganics	Soil, Dirt and Fines	Residuals	Non-distinct Fines	Non-distinct Fines	Soil, Rocks, and Sand	Liquids
		Fines/Sorting Residue	Nondistinct Fines		Miscellaneous Inorganics	Miscellaneous Inorganics	Miscellaneous Inorganics	R/C Organic	Fines
		Sludge/Special Industrial	Miscellaneous Organics		Cosmetics	Miscellaneous Organics	Cosmetics		Food Waste: K-Cups
		Soil, Rocks, Sand	Animal Carcasses		Soil, Dirt, Fines		Miscellaneous Organics		Other Organic Waste
		R/C Consumer Products			Miscellaneous Organics				
		R/C Organics			Animal Carcasses				
		Animal Carcasses							

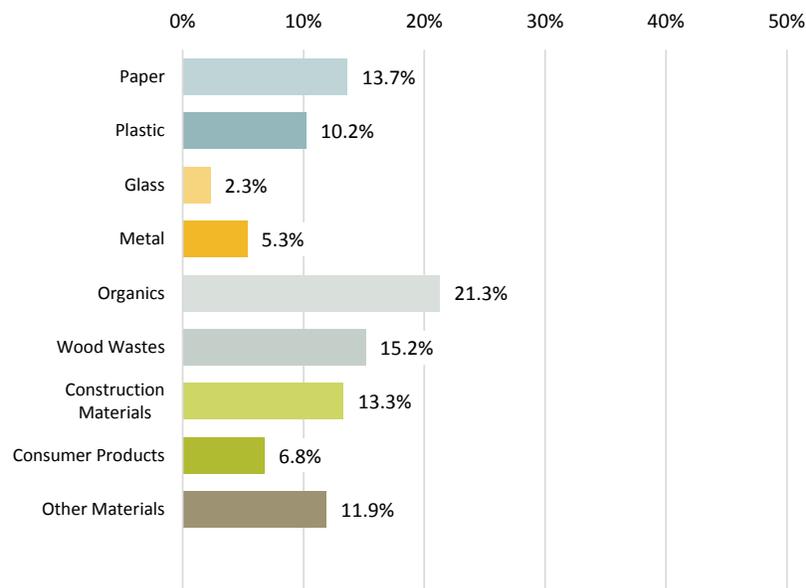
Supplemental Statewide Results—Overall Disposed Waste Stream

This section characterizes the overall disposed MSW stream for the entire State of Washington by combining all four of the sectors, all six WGAs considered in this study, and supplemental data from seven other city and county studies. Characterization results are presented for the 36 *material types* that resulted from the process of combining material lists from these eight analyses.

OVERVIEW BY MATERIAL CLASS

Composition estimates by material class for the overall statewide disposed waste stream are illustrated in Figure 37. The largest material class in the overall waste stream is Organics, which account for over one fifth (21%) of the waste stream by weight, followed by Wood Wastes (15%) and Paper (14%).

Figure 37: Supplemental Statewide Results—Overall Statewide Disposed Waste Stream Composition by Material Class, 2015-2016



TEN MOST PREVALENT MATERIALS

When combined, the ten most prevalent *material types* in the overall waste stream account for nearly two thirds of the waste stream (65%), as shown in Table 58. *Food* (15%) and *lumber and pallets* (9%) are the most prevalent *material types*, together comprising nearly one quarter of the overall waste stream.

**Table 58: Supplemental Statewide Results—Overall Statewide Disposed Waste Stream
Ten Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Food	15.4%	15.4%	707,566
Lumber and Pallets	8.8%	24.3%	405,404
Remainder/Composite Wood	6.3%	30.6%	290,036
Other C&D	5.9%	36.5%	271,596
Green Waste	5.9%	42.4%	269,799
Other Materials	4.7%	47.1%	217,517
Plastic Bags and Film	4.6%	51.7%	212,600
Compostable Paper	4.4%	56.1%	200,491
Mixed Grade Paper	4.3%	60.4%	196,804
Remainder/Composite Plastics	4.2%	64.6%	191,255
Total	64.6%		2,963,068

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington’s overall disposed waste stream are listed in Table 59.

**Table 59: Supplemental Statewide Results—Overall Statewide Disposed Waste Stream
Detailed Composition, 2015-2016**

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	13.7%		626,695	Wood Waste	15.2%		695,440
Newspaper	0.8%	0.1%	37,284	Lumber and Pallets	8.8%	1.0%	405,404
Corrugated Cardboard	2.6%	0.2%	120,446	Remainder/Composite Wood	6.3%	0.9%	290,036
Mixed Grade Paper	4.3%	0.3%	196,804				
Compostable Paper	4.4%	0.3%	200,491	Construction Materials	13.3%		611,629
Remainder/Composite Paper	1.6%	0.3%	71,670	Asphalt Roofing	1.8%	0.7%	81,287
				Drywall	2.8%	0.5%	129,725
Plastic	10.2%		469,923	Carpet and Carpet Padding	2.3%	0.6%	105,501
#1 PET Bottles	1.0%	0.1%	43,918	Natural Wood	0.5%	0.3%	23,520
#2 HDPE Bottles	0.5%	0.1%	22,150	Other C&D	5.9%	1.1%	271,596
Plastic Bags and Film	4.6%	0.3%	212,600				
Remainder/Composite Plastics	4.2%	0.3%	191,255	Consumer Products	6.8%		310,581
				Textiles and Clothing*	2.8%	0.4%	126,848
Glass	2.3%		105,837	Tires and Rubber*	0.7%	0.2%	30,917
Glass Bottles and Containers	1.4%	0.1%	65,412	Furniture*	1.9%	0.4%	86,492
Remainder/Composite Glass	0.9%	0.2%	40,426	Mattresses*	0.9%	0.3%	40,105
				E-Waste	0.6%	0.1%	26,219
Metal	5.3%		245,533	Other Materials	11.9%		546,535
Aluminum Cans	0.3%	0.0%	12,680	Disposable Diapers*	3.0%	0.2%	138,861
Tin Cans	0.4%	0.0%	20,346	Animal Excrement*	3.3%	0.3%	153,483
Other Ferrous Metals	1.9%	0.5%	86,663	Medical/Pharmaceutical Waste	0.5%	0.2%	20,814
Other Non-Ferrous Metals	0.7%	0.2%	30,350	Household Batteries	0.0%	0.0%	1,970
Remainder/Composite Metals	2.1%	0.3%	95,494	Other Hazardous Wastes	0.3%	0.1%	13,890
				Other Materials	4.7%	0.7%	217,517
Organics	21.3%		977,365	Totals	100%		4,589,537
Food	15.4%	0.8%	707,566	Sample Count	2,943		
Green Waste	5.9%	0.8%	269,799				

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

*Not every study used for the supplemental analysis included these materials. These estimates are based on samples from the studies that did include these materials.

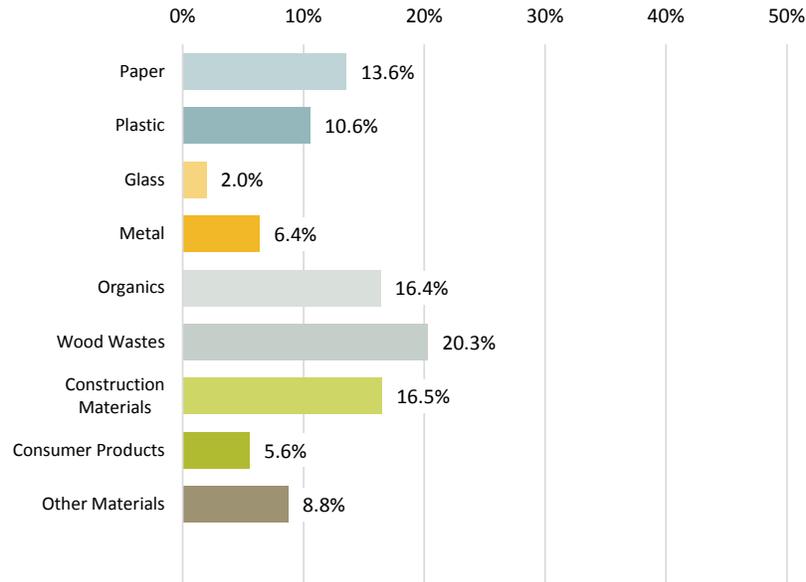
Supplemental Statewide Results—Commercial Waste

This section characterizes the MSW disposed by the commercial sector from the entire State of Washington by combining data from all six WGAs considered in this study and supplemental data from seven other city and county studies. Characterization results are presented for the 36 *material types* that resulted from the process of combining material lists from these eight studies.

OVERVIEW BY MATERIAL CLASS

Composition estimates by material class for the statewide commercial disposed waste sector are illustrated in Figure 38. The largest material class in this waste sector is Wood Wastes, which accounts for approximately one fifth (20%) of the waste sector by weight, followed by Construction Materials (17%), Organics (16%), and Paper (14%).

Figure 38: Supplemental Statewide Results—Statewide Commercial Disposed Waste Sector Composition by Material Class, 2015-2016



TEN MOST PREVALENT MATERIALS

The ten most prevalent *material types* in the commercial waste sector, as shown in Table 60, account for two thirds (67%) of the commercial waste stream by weight. Half of the materials in the list—*food, lumber and pallets, compostable paper, green waste, and corrugated cardboard*—are typically recoverable either through compost or recycling programs, and together these five materials account for over one third (36%) of commercial waste by weight.

**Table 60: Supplemental Statewide Results—Statewide Commercial Disposed Waste Sector
Ten Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Food	12.8%	12.8%	225,385
Lumber and Pallets	11.8%	24.7%	207,769
Remainder/Composite Wood	8.5%	33.1%	148,599
Other C&D	8.0%	41.1%	140,784
Plastic Bags and Film	5.5%	46.6%	96,184
Other Materials	5.4%	52.1%	95,655
Compostable Paper	4.2%	56.2%	73,247
Remainder/Composite Plastics	3.9%	60.1%	67,743
Green Waste	3.6%	63.7%	62,409
Corrugated Cardboard	3.4%	67.1%	59,753
Total	67.1%		1,177,529

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington’s commercial disposed waste sector are listed in Table 61.

**Table 61: Supplemental Statewide Results—Statewide Commercial Disposed Waste Sector
Detailed Composition, 2015-2016**

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	13.6%		238,285	Wood Waste	20.3%		356,368
Newspaper	0.5%	0.1%	8,190	Lumber and Pallets	11.8%	2.3%	207,769
Corrugated Cardboard	3.4%	0.5%	59,753	Remainder/Composite Wood	8.5%	2.2%	148,599
Mixed Grade Paper	3.3%	0.4%	57,285				
Compostable Paper	4.2%	0.5%	73,247	Construction Materials	16.5%		289,795
Remainder/Composite Paper	2.3%	0.6%	39,810	Asphalt Roofing	2.7%	1.8%	48,025
				Drywall	3.3%	1.2%	57,744
Plastic	10.6%		185,602	Carpet and Carpet Padding	2.0%	1.3%	35,646
#1 PET Bottles	0.8%	0.1%	14,159	Natural Wood	0.4%	0.5%	7,596
#2 HDPE Bottles	0.4%	0.1%	7,516	Other C&D	8.0%	2.5%	140,784
Plastic Bags and Film	5.5%	0.8%	96,184				
Remainder/Composite Plastics	3.9%	0.6%	67,743	Consumer Products	5.6%		97,710
				Textiles and Clothing*	2.2%	1.0%	38,542
Glass	2.0%		34,445	Tires and Rubber*	0.8%	0.4%	14,104
Glass Bottles and Containers	0.9%	0.2%	14,998	Furniture*	1.5%	0.8%	26,606
Remainder/Composite Glass	1.1%	0.6%	19,447	Mattresses*	0.6%	0.3%	10,179
				E-Waste	0.5%	0.2%	8,280
Metal	6.4%		112,295	Other Materials	8.8%		153,724
Aluminum Cans	0.2%	0.0%	3,600	Disposable Diapers*	1.1%	0.3%	18,636
Tin Cans	0.3%	0.1%	5,381	Animal Excrement*	1.0%	0.4%	17,271
Other Ferrous Metals	2.7%	1.2%	46,952	Medical/Pharmaceutical Waste	1.0%	0.5%	17,230
Other Non-Ferrous Metals	0.9%	0.5%	15,780	Household Batteries	0.0%	0.0%	449
Remainder/Composite Metals	2.3%	0.6%	40,581	Other Hazardous Wastes	0.3%	0.1%	4,483
				Other Materials	5.4%	1.6%	95,655
Organics	16.4%		287,794	Totals	100%		1,756,019
Food	12.8%	1.7%	225,385	Sample Count	950		
Green Waste	3.6%	1.1%	62,409				

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

*Not every study used for the supplemental analysis included these materials. These estimates are based on samples from the studies that did include these materials.

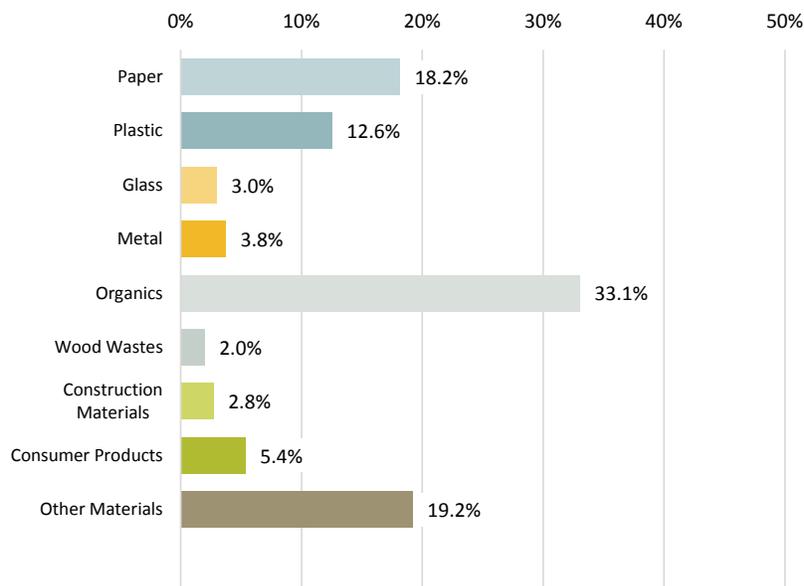
Supplemental Statewide Results—Residential Waste

This section characterizes the MSW disposed by the residential sector from the entire State of Washington by combining data from all six WGAs considered in this study and supplemental data from seven other city and county studies. Characterization results are presented for the 36 *material types* that resulted from the process of combining material lists from these eight studies.

OVERVIEW BY MATERIAL CLASS

Composition estimates by material class for the statewide residential disposed waste sector are illustrated in Figure 39. The largest material class in this waste sector is Organics, which account for approximately one third (33%) of the waste sector by weight, followed by Other Materials (19%) and Paper (18%).

Figure 39: Supplemental Statewide Results—Statewide Residential Disposed Waste Sector Composition by Material Class, 2015-2016



TEN MOST PREVALENT MATERIALS

Food is the most prevalent *material type*, comprising over one quarter (25%) of residential disposed waste. In total, approximately 80 percent of residential waste is composed of the ten *material types* shown in Table 62. *Green waste, mixed grade paper, and compostable paper* are additional most prevalent *material types* that are traditionally recyclable or compostable, each composing approximately seven percent of residential disposed waste.

**Table 62: Supplemental Statewide Results—Statewide Residential Disposed Waste Sector
Ten Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Food	25.3%	25.3%	458,667
Green Waste	7.8%	33.1%	141,781
Animal Excrement*	7.2%	40.3%	130,568
Mixed Grade Paper	6.9%	47.1%	124,510
Compostable Paper	6.6%	53.8%	120,494
Disposable Diapers*	6.4%	60.2%	116,774
Plastic Bags and Film	5.7%	65.9%	103,788
Other Materials	5.1%	71.0%	91,864
Remainder/Composite Plastics	4.6%	75.6%	83,410
Textiles and Clothing*	3.9%	79.5%	71,248
Total	79.5%		1,443,103

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington’s residential disposed waste sector are listed in Table 63.

**Table 63: Supplemental Statewide Results—Statewide Residential Disposed Waste Sector
Detailed Composition, 2015-2016**

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	18.2%		330,170	Wood Waste	2.0%		36,453
Newspaper	1.5%	0.1%	26,638	Lumber and Pallets	0.9%	0.2%	16,886
Corrugated Cardboard	2.1%	0.2%	37,241	Remainder/Composite Wood	1.1%	0.2%	19,567
Mixed Grade Paper	6.9%	0.6%	124,510				
Compostable Paper	6.6%	0.3%	120,494	Construction Materials	2.8%		49,942
Remainder/Composite Paper	1.2%	0.1%	21,287	Asphalt Roofing	0.0%	0.0%	634
				Drywall	0.4%	0.1%	6,769
Plastic	12.6%		228,133	Carpet and Carpet Padding	1.0%	0.5%	18,615
#1 PET Bottles	1.5%	0.3%	27,346	Natural Wood	0.2%	0.2%	4,078
#2 HDPE Bottles	0.7%	0.1%	13,589	Other C&D	1.1%	0.4%	19,846
Plastic Bags and Film	5.7%	0.3%	103,788				
Remainder/Composite Plastics	4.6%	0.3%	83,410	Consumer Products	5.4%		97,952
				Textiles and Clothing*	3.9%	0.3%	71,248
Glass	3.0%		54,650	Tires and Rubber*	0.5%	0.2%	9,870
Glass Bottles and Containers	2.5%	0.2%	44,948	Furniture*	0.2%	0.1%	3,630
Remainder/Composite Glass	0.5%	0.2%	9,702	Mattresses*	0.1%	0.1%	1,495
				E-Waste	0.6%	0.2%	11,709
Metal	3.8%		68,550	Other Materials	19.2%		349,361
Aluminum Cans	0.5%	0.1%	8,540	Disposable Diapers*	6.4%	0.4%	116,774
Tin Cans	0.8%	0.1%	13,806	Animal Excrement*	7.2%	0.5%	130,568
Other Ferrous Metals	0.9%	0.3%	16,860	Medical/Pharmaceutical Waste	0.1%	0.0%	2,519
Other Non-Ferrous Metals	0.5%	0.1%	8,222	Household Batteries	0.1%	0.0%	1,130
Remainder/Composite Metals	1.2%	0.2%	21,122	Other Hazardous Wastes	0.4%	0.1%	6,506
				Other Materials	5.1%	0.5%	91,864
Organics	33.1%		600,448	Totals	100%		1,815,660
Food	25.3%	1.2%	458,667	Sample Count	922		
Green Waste	7.8%	1.5%	141,781				

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

*Not every study used for the supplemental analysis included these materials. These estimates are based on samples from the studies that did include these materials.

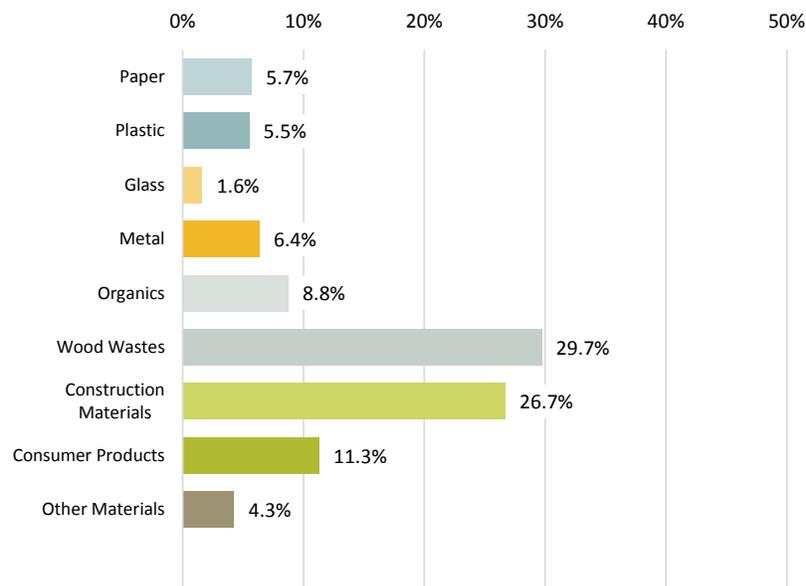
Supplemental Statewide Results—Self-hauled Waste

This section characterizes the MSW disposed by the self-hauled sector (both self-hauled C&D and self-hauled other) from the entire State of Washington by combining data from all six WGAs considered in this study and supplemental data from seven other city and county studies. Characterization results are presented for the 36 *material types* that resulted from the process of combining material lists from these eight studies.

OVERVIEW BY MATERIAL CLASS

Composition estimates by material class for statewide self-hauled disposed waste are illustrated in Figure 40. The largest material class in this waste sector is Wood Wastes, which accounts for approximately 30 percent of the waste sector by weight, followed by Construction Materials (27%) and Consumer Products (11%).

Figure 40: Supplemental Statewide Results—Statewide Self-hauled Disposed Waste Sector Composition by Material Class, 2015-2016



TEN MOST PREVALENT MATERIALS

When combined, the ten most prevalent *material types* in the self-hauled disposed waste sector account for three fourths of the waste sector, as shown in Table 64. *Lumber and pallets* (18%), *remainder/composite wood* (12%), and *other C&D* (11%) are the three most prevalent materials in the self-hauled disposed waste sector.

**Table 64: Supplemental Statewide Results—Statewide Self-hauled Disposed Waste Sector
Ten Most Prevalent Material Types, 2015-2016**

Material	Est. Percent	Cum. Percent	Est. Tons
Lumber and Pallets	17.8%	17.8%	180,749
Remainder/Composite Wood	12.0%	29.7%	121,870
Other C&D	10.9%	40.6%	110,967
Green Waste	6.4%	47.1%	65,609
Drywall	6.4%	53.5%	65,212
Furniture*	5.5%	59.0%	56,256
Carpet and Carpet Padding	5.0%	64.0%	51,240
Remainder/Composite Plastics	3.9%	68.0%	40,102
Remainder/Composite Metals	3.3%	71.3%	33,790
Asphalt Roofing	3.2%	74.5%	32,627
Total	74.5%		758,423

APPENDIX E: SUPPLEMENTAL COMPOSITION RESULTS

2015-2016 Washington Statewide Waste Characterization Study

DETAILED COMPOSITION

The composition percentages by weight for each *material type* in Washington’s self-hauled disposed waste sector are listed in Table 65.

**Table 65: Supplemental Statewide Results—Statewide Self-hauled Disposed Waste Sector
Detailed Composition, 2015-2016**

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	5.7%		58,240	Wood Waste	29.7%		302,618
Newspaper	0.2%	0.1%	2,456	Lumber and Pallets	17.8%	2.3%	180,749
Corrugated Cardboard	2.3%	0.5%	23,451	Remainder/Composite Wood	12.0%	1.7%	121,870
Mixed Grade Paper	1.5%	0.2%	15,010				
Compostable Paper	0.7%	0.1%	6,750	Construction Materials	26.7%		271,892
Remainder/Composite Paper	1.0%	0.3%	10,573	Asphalt Roofing	3.2%	1.3%	32,627
				Drywall	6.4%	1.4%	65,212
Plastic	5.5%		56,188	Carpet and Carpet Padding	5.0%	1.1%	51,240
#1 PET Bottles	0.2%	0.1%	2,413	Natural Wood	1.2%	0.9%	11,845
#2 HDPE Bottles	0.1%	0.0%	1,045	Other C&D	10.9%	2.3%	110,967
Plastic Bags and Film	1.2%	0.2%	12,628				
Remainder/Composite Plastics	3.9%	0.6%	40,102	Consumer Products	11.3%		114,918
				Textiles and Clothing*	1.7%	0.4%	17,059
Glass	1.6%		16,742	Tires and Rubber*	0.7%	0.4%	6,943
Glass Bottles and Containers	0.5%	0.2%	5,465	Furniture*	5.5%	1.2%	56,256
Remainder/Composite Glass	1.1%	0.3%	11,276	Mattresses*	2.8%	1.1%	28,431
				E-Waste	0.6%	0.3%	6,230
Metal	6.4%		64,687	Other Materials	4.3%		43,449
Aluminum Cans	0.1%	0.0%	539	Disposable Diapers*	0.3%	0.1%	3,451
Tin Cans	0.1%	0.0%	1,159	Animal Excrement*	0.6%	0.2%	5,644
Other Ferrous Metals	2.2%	0.5%	22,850	Medical/Pharmaceutical Waste	0.1%	0.1%	1,065
Other Non-Ferrous Metals	0.6%	0.2%	6,349	Household Batteries	0.0%	0.0%	390
Remainder/Composite Metals	3.3%	0.7%	33,790	Other Hazardous Wastes	0.3%	0.1%	2,901
				Other Materials	2.9%	1.1%	29,997
Organics	8.8%		89,124	Totals	100%		1,017,858
Food	2.3%	0.4%	23,514	Sample Count	1,071		
Green Waste	6.4%	1.4%	65,609				

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

*Not every study used for the supplemental analysis included these materials. These estimates are based on samples from the studies that did include these materials.