

Sonoma County Waste Management Agency Waste Characterization Study

Final Report

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In cooperation with
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Introduction and Summary of Findings

Purpose and Approach of the Study

The Sonoma County Waste Management Agency contracted with Cascadia Consulting Group to characterize the municipal solid waste disposed by single-family residential, commercial (including multi-family), and self-hauled sources. The study employed hand-sorting and visual characterization of waste samples to derive statistically valid estimates of the composition of residential, commercial, and self-hauled waste from four waste facilities in the County and for the County as a whole.

This document presents the findings of the waste characterization study.

Summary of Findings

Of the nearly 375,000 tons disposed of in Sonoma County, approximately 70% consists of materials that are potentially recoverable. For waste from both residential and commercial sources, the most prevalent class of materials is *organics*, which represents approximately 51% and 42% of waste from those sectors, respectively. *Paper* is the second most prevalent material class for both sectors, at approximately 19% for the residential sector and nearly 21% for the commercial sector. Almost 64% of the self-hauled waste stream is composed of *construction and demolition materials*.

The two most prevalent material classes for the County's disposed waste stream as a whole are *organics* (36.3%) and *construction and demolition materials* (27.4%). The single most prevalent material is food, which comprises approximately 21% of the County's disposed waste stream.

Summary of Study Methods

Waste Sectors Defined

The consultant team defined waste sectors in a method consistent with the previous Sonoma County waste characterization study conducted in 1995/96. The three waste sectors are defined as follows:

- **Commercially collected residential waste** - waste collected by a waste-hauling company from single-family residences (including townhouses or buildings with up to four residential units). It typically arrives at the solid waste facility in packer trucks (e.g., side loaders, rear loaders, etc.).
- **Commercially collected commercial waste** - waste collected by a waste-hauling company from businesses, institutions, public venues, and multifamily buildings such as apartments and condominiums with more than four residential units. It typically arrives at the solid waste facility in packer trucks, roll-off containers, or compactor units.
- **Self-hauled waste** - waste that is brought to solid waste facilities by the resident or business that generated it. (In the particular cases of landscaping companies and cleaning/moving companies, it includes waste generated during their business operations, even though they did the work for another party.)

Allocation of Samples

To maximize the overall number of samples obtained and to provide results consistent with the previous waste characterization studies, a different number of samples were allocated to each waste sector. The data collection process for each sector also employed different characterization methods. Residential waste and commercial waste were characterized by hand-sorting randomly selected 200-pound samples of disposed waste. Self-hauled waste was characterized by visual inspection of randomly selected loads delivered to solid waste facilities. Table 1 shows the planned sample allocation and the actual number of samples characterized.

Table 1. Planned vs. Actual Characterized Waste Samples

	Planned			Actual		
	<i>Wet</i>	<i>Dry</i>	Total	<i>Wet</i>	<i>Dry</i>	Total
Residential	62	63	125	60	55	115
Commercial	63	62	125	69	69	138
Self-hauled	150	150	300	149	153	302
Total	275	275	550	278	277	555

Coordination

Prior to the scheduled field work, the consultant team met with key staff at the Sonoma County Waste Management Agency to arrange permission and to coordinate space requirements and other logistics for the field data collection effort.

The consultant team also worked with Sonoma County transfer station and landfill facility personnel to coordinate the process for randomly selecting loads of residential waste, commercial waste, and self-hauled waste. Sorting activities at Redwood Landfill were coordinated through Sonoma County Waste Management Agency staff.

Waste Categories and Divertibility Analysis

The 85 material categories included in this study were each categorized into one of 9 material classes (Paper, Plastic, Glass, Metal, Hazardous and Electronic waste, Organics, Construction and Demolition Materials, Special Waste, and Mixed Residue). See Appendix A for a detailed list and definitions of the 85 material categories that were used.

This section also provides definitions used for the divertibility analysis, wherein each material was classified according to one of four groups based on its expected divertibility.

- **Divertible Materials:** This includes materials for which source reduction programs or methods, collection programs, and/or recycling infrastructure exist, either broadly or in "forefront communities."
- **Compostable Materials:** This includes organic materials that are appropriate for municipal composting programs.
- **Potentially Divertible:** This includes materials for which methods and/or technology exist for recycling, reuse, or other beneficial uses, although programs to collect and process the materials are rare or nonexistent in the Sonoma area.
- **Other Materials:** This includes materials that do not fit any of the definitions above and that are not easily diverted from disposal.

Figure 1 shows the material types grouped according to these divertibility categories.

Figure 1. Material Divertibility Categories

Divertible	Compostable
Colored Ledger	Agricultural Crop Residues
Computer Paper	Branches & Stumps
Magazines & Catalogs	Food
Newspaper	Leaves & Grass
Other Office Paper	Manures
Paper Bags/Kraft	Other Compostable Paper
Phone Books & Directories	Prunings & Trimmings
Uncoated Corrugated Cardboard	Potentially Divertible
White Ledger	Asphalt Roofing
Brown Glass Bottles & Containers – CRV	Carpet
Brown Glass Bottles & Containers – Non-CRV	Carpet Padding
Clear Glass Bottles & Containers – CRV	Clean Gypsum Board
Clear Glass Bottles & Containers – non-CRV	Flat Glass
Green Glass Bottles & Containers – CRV	Fluorescent Tubes
Green Glass Bottles & Containers – Non-CRV	Other Recyclable Paper
Other Colored Glass Bottles & Containers – CRV	Paint
Other Colored Glass Bottles & Containers – Non-CRV	Textiles
#3-#7 Bottles – CRV	Vehicle & Equipment Fluids
#3-#7 Bottles – Non-CRV	Other
#3-#7 Other Containers – CRV	Ash
#3-#7 Other Containers – Non-CRV	Bulky Items
HDPE Colored Bottles – CRV	Durable Plastic Items
HDPE Colored Bottles – Non-CRV	Industrial Sludge
HDPE Natural Bottles – CRV	Non-recyclable Film
HDPE Natural Bottles – Non-CRV	Other HHW
Other HDPE Containers – CRV	Remainder/ Composite C&D
Other HDPE Containers – Non-CRV	Remainder/ Composite Glass
Other PETE Containers – CRV	Remainder/ Composite Hazardous & E-waste
Other PETE Containers – Non-CRV	Remainder/ Composite Metal
PETE Bottles – CRV	Remainder/ Composite Mixed Residue
PETE Bottles – Non-CRV	Remainder/ Composite Organics
Recyclable Plastic Film	Remainder/ Composite Paper
Aluminum Cans – CRV	Remainder/ Composite Plastic
Aluminum Cans – Non-CRV	Remainder/ Composite Special Waste
Major Appliances	Sewage Solids
Other Ferrous	Treated Medical Waste
Other Non-Ferrous	Treated Wood Waste
Tin/Steel Cans	
Asphalt Paving	
Clean recyclable wood (non-treated)	
Concrete	
Other Untreated/ Recyclable Wood	
Rock, Soil, & Fines	
Household Batteries	
Small Rechargeable Batteries	
Large Rechargeable Batteries	
Covered Electronic Waste	
Universal Waste	
Used Oil & Oil Filters	
Tires	

Waste Quantities

To determine the quantity of waste from each waste sector, the consultant team requested tonnage data from the Sonoma County Waste Management Agency. According to the data, over 374,300 tons of waste were disposed of by Sonoma County residents and businesses in the study period at the County's six disposal facilities.¹

Field Work

This section provides an overview of the how the field work was conducted. A more detailed description can be found in Appendix B.

Hand-sort Procedure

For this study, the consultant team hand-sorted 115 samples of residential waste and 138 samples of commercial waste. Samples sorted by hand were sorted into 85 material categories, and the material in each category was weighed. Material that was too small to sort into distinct categories was included in the material category *mixed residue*. The crew leader reviewed the sorted material for homogeneity before the sample components were weighed and then recorded the weight for each sorted material category on the sampling form. A full description of the hand-sort procedure is included in Appendix B.

Visual Characterization Procedure

The consultant team visually characterized 302 loads of self-haul waste. In conjunction with the California Integrated Waste Management Board (CIWMB), the consultant team has developed a reliable method of visually characterizing waste from the self-hauled waste sector. The method is especially useful for identifying recoverable materials that may be present in large quantities, characterizing waste loads that contain bulky items, and characterizing waste streams that tend to have substantial composition variation within individual loads (for example, loads that are half dirt and half lumber, separated at opposite ends of a truck).

The first step in visually estimating the composition of a selected load is to measure the volume of the waste. The visual estimator then records the estimated percentage of the load corresponding to each material class and next records the estimated percentages for specific material categories within the material classes. The step-by-step procedure that the consultant team used in this study is described fully in Appendix B.

Data Analysis

Following the on-site data collection, the consultant team entered all data recorded on the field forms into a customized database and reviewed it for data entry errors. The team calculated waste composition estimates using the methods described in Appendix C.

¹ Tonnage data is from February 2006 through January 2007. January 2006 was not included because of unusually high disposal due to flood-related debris.

Quantities of Waste

This section of the report summarizes the total tons of waste disposed during the February 2006 – January 2007 time period from each of the three waste sectors.²

Sonoma County residents and businesses disposed of over 374,000 tons of waste in the study period. Of the waste sectors, the commercial sector accounted for the largest share, contributing over 148,800 tons. The quantities of waste associated with each waste sector and solid waste facility are displayed in Figure 2 and Table 2.

Figure 2. Waste Quantities

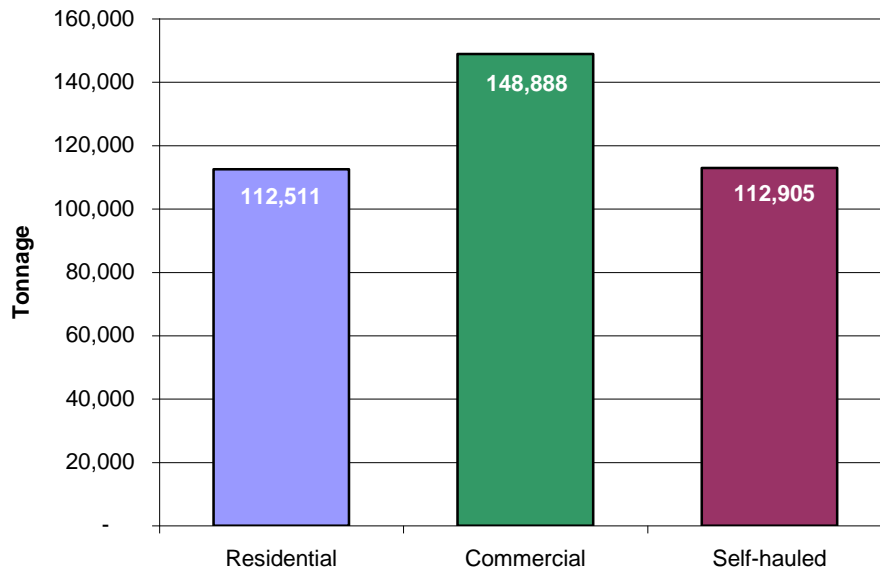


Table 2. Waste Quantities

Site	Residential	Commercial	Self-hauled	Total
Annapolis	444	170	1,661	2,275
Central	16,432	40,882	59,606	116,920
Guerneville	3,656	8,123	9,857	21,636
Healdsburg	20,296	30,799	22,611	73,706
Sonoma	26,098	36,348	19,170	81,616
Redwood	45,585	32,567		78,152
Total	112,511	148,888	112,905	374,305

² Tonnage data is from February 2006 through January 2007. January 2006 was not included because of unusually high disposal due to flood-related debris.

Composition of Waste

This chapter of the report presents key findings about the composition of the County’s waste. Waste characterization results for the County overall and for each waste sector include a pie chart showing the proportion of different material categories, a pie chart showing the results of the divertibility analysis, and a table showing the composition results for all 85 material categories following the pie charts.

Please note that due to rounding, numbers may not sum exactly to totals or subtotals.

Overall Waste Stream

The overall composition of Sonoma County waste includes waste from the three sectors:

- Commercially collected residential waste
- Commercially collected commercial waste
- Self-hauled waste

A total of 555 waste samples were sorted to characterize the 374,305 tons of waste disposed of in Sonoma County in the study period.

Key Findings

Organics (36.3%) and *construction and demolition materials* (27.4%) are the two most prevalent material classes found in Sonoma County’s overall waste stream, as shown in Figure 3. Food is the most common individual material disposed at approximately 21%. The two recyclable wood categories, clean recyclable wood and other recyclable wood, together account for almost 7% of the overall waste stream. As shown in Figure 4, more than two-thirds of the overall Sonoma County waste stream can be classified as divertible, potentially divertible, or compostable.

The detailed waste composition findings are shown in Table 3.

Figure 3. Waste Characterization, County Overall

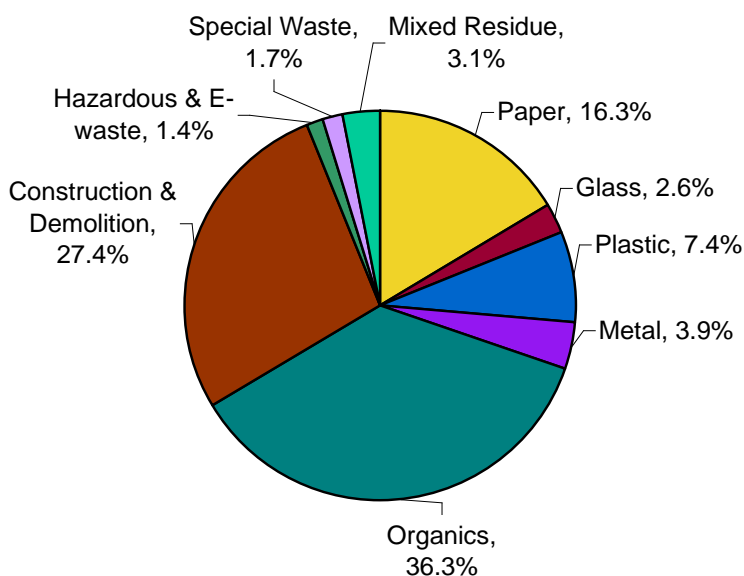
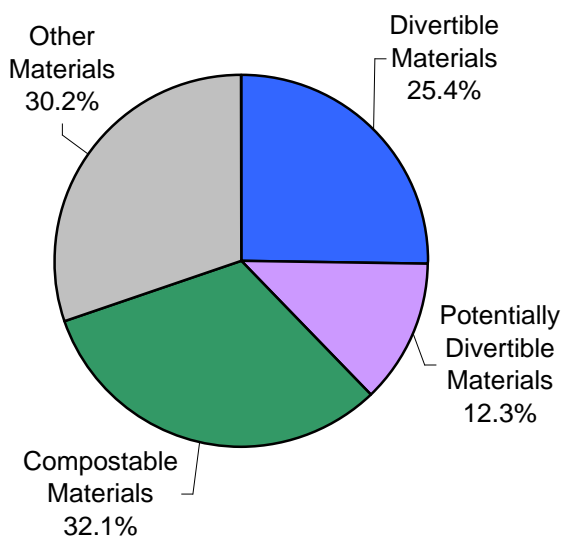


Figure 4. Divertibility Analysis, County Overall



Residential

A total of nearly 112,511 tons of waste were disposed of by the residential waste sector in the study period. The field crew sorted 115 waste samples in order to characterize this waste stream.

Key Findings

As shown in Figure 5, *organics* is the most prevalent material class for the residential waste stream by a significant amount, composing more than half of all the waste disposed by the sector. Disposed food alone represents over 35% of the residential waste stream, of which approximately 43% is vegetative material. The second most common material class is *paper* (19.0%). Nearly all of the paper found in the residential waste stream is divertible or compostable. The majority of all materials found in the residential waste stream are divertible, potentially divertible, or compostable, as shown in Figure 6. Approximately 46% of residential waste is compostable, and nearly 29% is divertible or potentially divertible.

The detailed waste composition results are shown in Table 4.

Figure 5. Waste Characterization, Residential

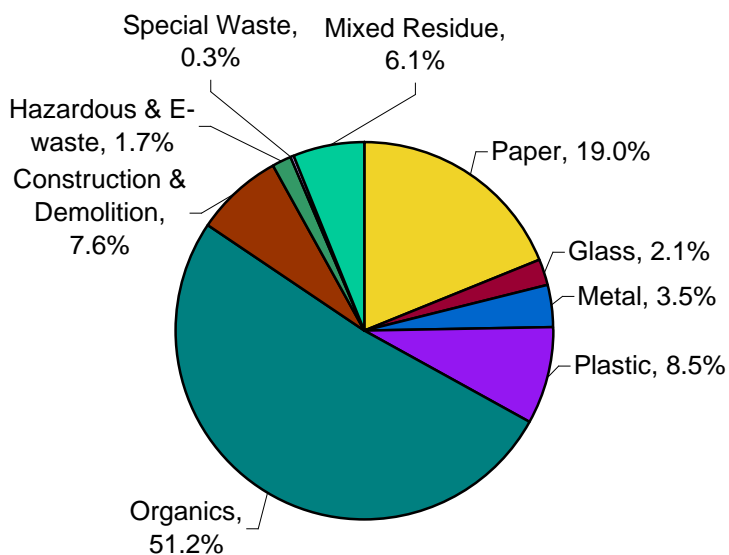
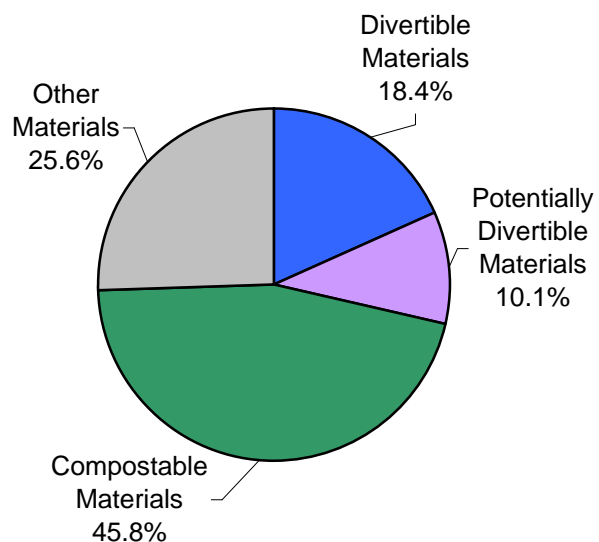


Figure 6. Divertibility Analysis, Residential



Commercial

A total of nearly 148,888 tons of waste were disposed of by the commercial waste sector in the study period. The field crew sorted 138 waste samples in order to characterize this waste stream.

Key Findings

As shown in Figure 7, similar to the residential waste sector, *organics* is the most common material class in the commercial waste sector, amounting to approximately 42% of the waste disposed by the sector. Disposed food is nearly 27% of the waste stream, of which approximately 51% is vegetative material. The second most abundant material class is *paper* (20.9%). As with the residential waste sector, the majority of material found in the commercial waste stream is divertible, potentially divertible, or compostable, as shown in Figure 8. Approximately 40% of commercial waste is compostable and another 36% is divertible or potentially divertible.

The detailed waste composition findings are shown in Table 5.

Figure 7. Waste Characterization, Commercial

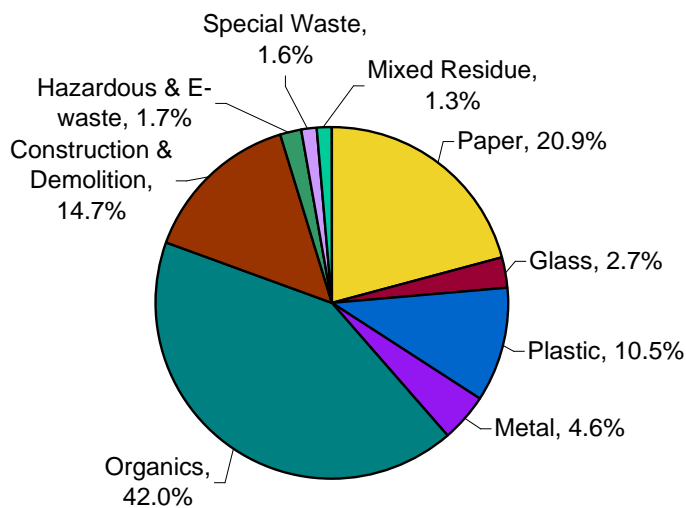
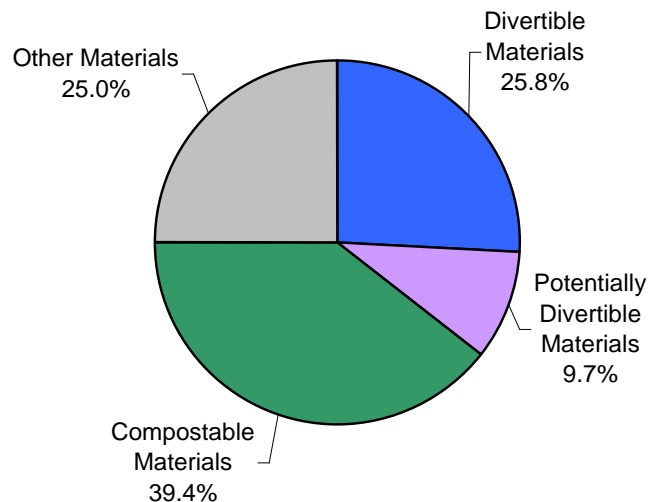


Figure 8. Divertibility Analysis, Commercial



Self-hauled

A total of over 112,900 tons of waste were disposed of by the self-hauled waste sector in the study period. The field crew sorted 302 waste samples in order to characterize this waste stream.

Key Findings

As shown in Figure 9, nearly two-thirds of the self-hauled waste stream is composed of construction and demolition materials. Combined, the three wood categories make up almost half of the *construction and demolition materials* class and over 30% of all self-hauled waste. The next most common material class is *organics* (13.9%). There is little food (0.63%) in the self-hauled stream. The most common components in the *organics* material class are leaves and grass (3.9%), prunings and trimmings (3.0%), and carpet (2.5%). Over half of the disposed waste from self-hauled sources is divertible, potentially divertible, or compostable, as shown in Figure 10. Approximately 9% of self-hauled waste is compostable, while nearly 32% is considered to be divertible.

The detailed waste composition findings are shown in Table 6.

Figure 9. Waste Characterization, Self-hauled

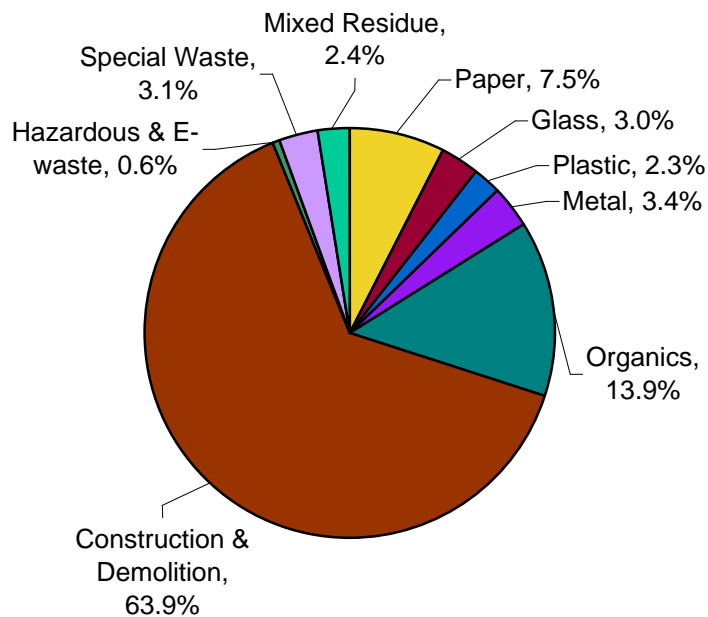
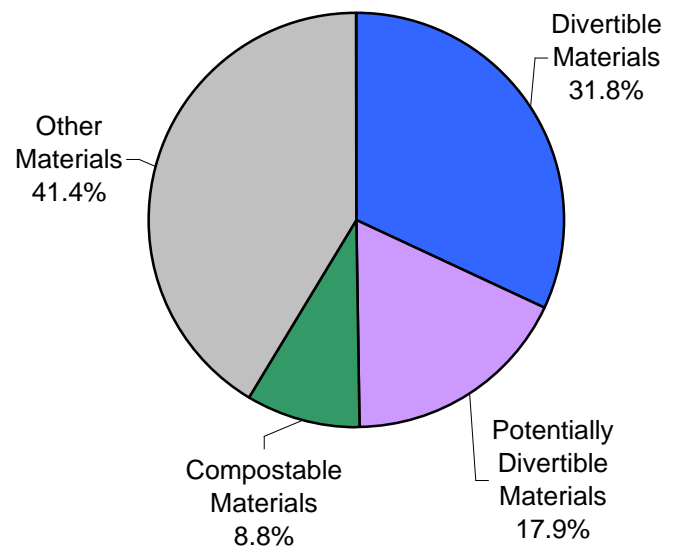


Figure 10. Divertibility Analysis, Self-hauled



Appendix A. Waste Sort Material Definitions

Material List and Definitions for Hand-sorting

Material List for Hand-sorting

Hand Sorting Material List	
PAPER	
1	Uncoated Corrugated Cardboard
2	Paper Bags/Kraft
3	Newspaper
4	White Ledger
5	Colored Ledger
6	Computer Paper
7	Other Office Paper
8	Magazines and Catalogs
9	Phone Books and Directories
10	Other Recyclable Paper
11	Other Compostable Paper
12	Remainder/ Composite Paper
GLASS	
13	Clear Glass Bottles and Containers – CRV
14	Clear Glass Bottles and Containers – non-CRV
15	Green Glass Bottles and Containers – CRV
16	Green Glass Bottles and Containers – Non-CRV
17	Brown Glass Bottles and Containers – CRV
18	Brown Glass Bottles and Containers – Non-CRV
19	Other Colored Glass Bottles and Containers – CRV
20	Other Colored Glass Bottles and Containers – Non-CRV
21	Flat Glass
22	Remainder/ Composite Glass
METAL	
23	Tin/Steel Cans
24	Major Appliances
25	Other Ferrous
26	Aluminum Cans – CRV
27	Aluminum Cans – Non-CRV
28	Other Non-Ferrous

Hand Sorting Material List	
29	Remainder/ Composite Metal
PLASTIC	
30	PETE Bottles – CRV
31	PETE Bottles – Non-CRV
32	Other PETE Containers – CRV
33	Other PETE Containers – Non-CRV
34	HDPE Natural Bottles – CRV
35	HDPE Natural Bottles – Non-CRV
36	HDPE Colored Bottles – CRV
37	HDPE Colored Bottles – Non-CRV
38	Other HDPE Containers – CRV
39	Other HDPE Containers – Non-CRV
40	#3-#7 Bottles – CRV
41	#3-#7 Bottles – Non-CRV
42	#3-#7 Other Containers – CRV
43	#3-#7 Other Containers – Non-CRV
44	Recyclable Plastic Film
45	Non-recyclable Film
46	Durable Plastic Items
47	Remainder/ Composite Plastic
ORGANIC	
48	Food
49	Leaves and Grass
50	Prunings and Trimmings
51	Branches and Stumps
52	Agricultural Crop Residues
53	Manures
54	Textiles
55	Carpet
56	Carpet Padding
57	Remainder/ Composite Organics
CONSTRUCTION & DEMOLITION	
58	Concrete
59	Asphalt Paving
60	Asphalt Roofing
61	Clean recyclable wood (non-treated)
62	Other Untreated/ Recyclable Wood

Hand Sorting Material List	
63	Treated Wood Waste
64	Clean Gypsum Board
65	Rock, Soil, and Fines
66	Remainder/ Composite Construction and Demolition
HAZARDOUS & E-WASTE	
67	Paint
68	Vehicle and Equipment Fluids
69	Used Oil and Oil Filters
70	Large Rechargeable Batteries
71	Small Rechargeable Batteries
72	Household Batteries
73	Universal Waste
74	Covered Electronic Waste
75	Fluorescent Tubes
76	Other HHW
77	Remainder/ Composite Hazardous and E-waste
SPECIAL WASTE	
78	Ash
79	Sewage Solids
80	Industrial Sludge
81	Treated Medical Waste
82	Bulky Items
83	Tires
84	Remainder/ Composite Special Waste
MIXED RESIDUE	
85	Mixed Residue

Material Definitions for Hand-sorting

Hand Sorting Material List		
PAPER		
Material ID & Name	Material Type Definition	
1	Uncoated Corrugated Cardboard	Uncoated Corrugated Cardboard usually has three layers. The center wavy layer is sandwiched between the two outer layers. It does not have any wax coating on the inside or outside. Examples include entire cardboard containers, such as shipping and moving boxes, computer packaging cartons, and sheets and pieces of boxes and cartons. This type does not include chipboard.
2	Paper Bags/Kraft	Paper Bags means bags and sheets made from Kraft paper. Examples include paper grocery bags, fast food bags, department store bags, and heavyweight sheets of Kraft packing paper.
3	Newspaper	Newspaper means paper used in newspapers. Examples include newspaper and glossy inserts, and all items made from newsprint, such as free advertising guides, election guides, plain news packing paper, stapled college schedules of classes, and tax instruction booklets.
4	White Ledger	White Ledger means uncolored bond, rag, or stationary grade paper. It may have colored ink on it. When the paper is torn, the fibers are white. Examples include white photocopy, white laser print, and letter paper.
5	Colored Ledger	Colored Ledger means colored bond, rag, or stationery grade paper. When the paper is torn, the fibers are colored throughout. Examples include colored photocopy and letter paper. This type does not include fluorescent dyed paper or deep-tone dyed paper such as goldenrod colored paper.
6	Computer Paper	Computer Paper means paper used for computer printouts. This type usually has a strip of form feed holes along two edges. If there are no holes, then the edges show tear marks. This type can be white or striped. Examples include computer paper and printouts from continuous feed printers. This type does not include "white ledger" used in laser or impact printers, nor computer paper containing groundwood.
7	Other Office Paper	Other Office Paper means other kinds of paper used in offices. Examples include manila folders, manila envelopes, index cards, white envelopes, white window envelopes, white or colored notebook paper, carbonless forms, and junk mail. This type does not include "white ledger," "colored ledger," or "computer paper."
8	Magazines and Catalogs	Magazines and Catalogs means items made of glossy coated paper. This paper is usually slick, smooth to the touch, and reflects light. Examples include glossy magazines, catalogs, brochures, and pamphlets.
9	Phone Books and Directories	Phone Books and Directories means thin paper between coated covers. These items are bound along the spine with glue. Examples include whole or damaged telephone books, "yellow pages," real estate listings, and some non-glossy mail order catalogs.

PAPER (continued)

Material ID & Name	Material Type Definition
10 Other Recyclable Paper	Other Recyclable Paper means items made mostly of paper that do not fit into any of the above types. Paper may be combined with minor amounts of other materials such as wax or glues. This type includes items made of chipboard, groundwood paper, and deep-toned or fluorescent dyed paper. Examples include cereal and cracker boxes, unused paper plates and cups, goldenrod colored paper, school construction paper/butcher paper, milk cartons, ice cream cartons and other frozen food boxes, unopened junk mail, colored envelopes for greeting cards, pulp paper egg cartons, unused pulp paper plant pots, and hardcover and softcover books.
11 Other Compostable Paper	Other Compostable Paper means items that were soiled with food or water during use. This type includes paper towels, paper plates, waxed paper, tissues, waxed corrugated cardboard, fast food wrappers, waxed paper, and other papers (e.g., pizza boxes and pizza box inserts).
12 Remainder/ Composite Paper	Remainder/Composite Paper means items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, food, and moisture. Examples include aseptic packages, blueprints, sepia, onion skin, carbon paper, self-adhesive notes, and photographs.

GLASS

Material ID & Name	Material Type Definition
13 Clear Glass Bottles and Containers – CRV	Clear Glass Bottles and Containers – CRV means clear glass beverage and food containers with a California Redemption Value (CRV) label. Examples include whole or broken clear soda and beer bottles, fruit juice bottles.
14 Clear Glass Bottles and Containers – Non-CRV	Clear Glass Bottles and Containers – Non-CRV means clear glass containers that do not have a CRV label.
15 Green Glass Bottles and Containers – CRV	Green Glass Bottles and Containers – CRV means green-colored glass containers with a CRV label. Examples include whole or broken green soda and beer bottles, and whole or broken green wine bottles.
16 Green Glass Bottles and Containers – Non-CRV	Green Glass Bottles and Containers – Non-CRV means green-colored glass containers that do not have a CRV label.

GLASS (continued)

Material ID & Name		Material Type Definition
17	Brown Glass Bottles and Containers – CRV	Brown Glass Bottles and Containers – CRV means brown-colored glass containers with a CRV label. Examples include whole or broken brown soda and beer bottles, and whole or broken brown wine bottles.
18	Brown Glass Bottles and Containers – Non-CRV	Brown Glass Bottles and Containers – Non-CRV means brown-colored glass containers that do not have a CRV label.
19	Other Colored Glass Bottles and Containers – CRV	Other Colored Glass Bottles and Containers – CRV means colored glass containers and bottles other than green or brown with a CRV label. Examples include whole or broken blue or other colored bottles and containers.
20	Other Colored Glass Bottles and Containers – Non-CRV	Other Colored Glass Bottles and Containers – Non-CRV means colored glass containers other than green or brown that do not have a CRV label.
21	Flat Glass	Flat Glass means clear or tinted glass that is flat. Examples include glass windowpanes, doors, and tabletops, flat automotive window glass (side windows), safety glass, and architectural glass. This type does not include windshields, laminated glass, or any curved glass.
22	Remainder/Composite Glass	Remainder/Composite Glass means glass that cannot be put in any other type. It includes items made mostly of glass but combined with other materials. Examples include Pyrex, Corningware, crystal and other glass tableware, mirrors, non-fluorescent light bulbs, and auto windshields.

METAL

Material ID & Name		Material Type Definition
23	Tin/Steel Cans	Tin/Steel Cans means rigid containers made mainly of steel. These items will stick to a magnet and may be tin-coated. This type is used to store food, beverages, paint, and a variety of other household and consumer products. Examples include canned food and beverage containers, empty metal paint cans, empty spray paint and other aerosol containers, and bimetal containers with steel sides and aluminum ends.
24	Major Appliances	Major Appliances means discarded major appliances of any color. These items are often enamel-coated. Examples include washing machines, clothes dryers, hot water heaters, stoves, and refrigerators. This type does not include electronics, such as televisions and stereos.
25	Other Ferrous	Other Ferrous means any iron or steel that is magnetic or any stainless steel item. This type does not include "tin/steel cans." Examples include structural steel beams, metal clothes hangers, metal pipes, stainless steel cookware, security bars, used oil filters, and scrap ferrous items.

METAL (continued)

Material ID & Name		Material Type Definition
26	Aluminum Cans – CRV	Aluminum Cans – CRV means any food or beverage container that is made mainly of aluminum and are marked as CRV containers. Examples include most aluminum soda or beer cans. This type does not include bimetal containers with steel sides and aluminum ends.
27	Aluminum Cans – Non-CRV	Aluminum Cans – non-CRV means any food or beverage container that is made mainly of aluminum and is not marked as CRV containers.
28	Other Non-Ferrous	Other Non-Ferrous means any metal item, other than aluminum cans, that is not stainless steel and that is not magnetic. These items may be made of aluminum, copper, brass, bronze, lead, zinc, or other metals. Examples include aluminum window frames, aluminum siding, copper wire, shell casings, brass pipe, and aluminum foil.
29	Remainder/Composite Metal	Remainder/Composite Metal means metal that cannot be put in any other type. This type includes items made mostly of metal but combined with other materials and items made of both ferrous metals and non-ferrous metal combined. Examples include small non-electronic appliances such as toasters and hair dryers, motors, insulated wire, and finished products that contain a mixture of metals, or metals and other materials, whose weight is derived significantly from the metal portion of its construction.

PLASTIC

Material ID & Name		Material Type Definition
30	PETE Bottles – CRV	PETE Bottles – CRV means clear or colored PETE (polyethylene terephthalate) bottles that are marked as CRV containers. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. The color is usually clear, transparent green, or amber. A PETE bottle usually has a small dot left from the manufacturing process, not a seam. It does not turn white when bent. Examples of narrow and wide neck bottles include: soft drink, water, beer, and liquor bottles.
31	PETE Bottles – Non-CRV	PETE Bottles – Non-CRV means clear or colored PETE (polyethylene terephthalate) bottles that are not marked as CRV containers. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. The color is usually clear, transparent green, or amber. A PETE bottle usually has a small dot left from the manufacturing process, not a seam. It does not turn white when bent. Examples of narrow and wide neck bottles include: cooking oil, pastry jars, food jars, and aspirin bottles.
32	Other PETE Containers – CRV	Other PETE Containers – CRV means PETE (polyethylene terephthalate) containers (other than bottles) that are marked as CRV containers. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. A PETE container usually has a small dot left from the manufacturing process, not a seam.

PLASTIC (continued)

Material ID & Name		Material Type Definition
33	Other PETE Containers – Non-CRV	Other PETE Containers – Non-CRV means PETE (polyethylene terephthalate) containers (other than bottles) that are not marked as CRV containers. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. A PETE container usually has a small dot left from the manufacturing process, not a seam.
34	HDPE Natural Bottles – CRV	HDPE Natural Bottles – CRV means natural HDPE (high-density polyethylene) bottles that are marked as CRV containers. This plastic is cloudy white, allowing light to pass through it. When marked for identification, it bears the number 2 in the triangular recycling symbol. Examples include milk jugs, water jugs, and some juice bottles.
35	HDPE Natural Bottles – Non-CRV	HDPE Natural Bottles – Non-CRV means natural HDPE (high-density polyethylene) bottles that are not marked as CRV containers. This plastic is cloudy white, allowing light to pass through it. When marked for identification, it bears the number 2 in the triangular recycling symbol.
36	HDPE Colored Bottles – CRV	HDPE Colored Bottles – CRV means colored HDPE (high-density polyethylene) containers that are marked as CRV containers. This plastic is a solid color, preventing light from passing through it. When marked for identification, it bears the number 2 in the triangular recycling symbol. Examples include narrow and wide mouth food containers, such as for coffee and coffee creamer.
37	HDPE Colored Bottles – Non-CRV	HDPE Colored Bottles – Non-CRV means colored HDPE (high-density polyethylene) containers that are not marked as CRV containers. This plastic is a solid color, preventing light from passing through it. When marked for identification, it bears the number 2 in the triangular recycling symbol. Examples include detergent bottles, some shampoo and hair-care bottles, empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid bottles.
38	Other HDPE Containers – CRV	Other HDPE Containers – CRV means all types of HDPE (high-density polyethylene) containers not included above that are marked as CRV containers. When marked for identification, it bears the number 2 in the triangular recycling symbol.
39	Other HDPE Containers – Non-CRV	Other HDPE Containers – Non-CRV means all types of HDPE (high-density polyethylene) containers not included above that are not marked as CRV containers. When marked for identification, it bears the number 2 in the triangular recycling symbol.
40	#3-#7 Bottles – CRV	#3-#7 Bottles – CRV means plastic bottles made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), PS (polystyrene), or mixed resins and are marked as CRV containers. When marked for identification, these bottles bear the number 3, 4, 5, 6, or 7 in the triangular recycling symbol. Examples include bottles for some juices.

PLASTIC (continued)

Material ID & Name	Material Type Definition
41 #3-#7 Bottles – Non-CRV	#3-#7 Bottles – Non-CRV means plastic bottles made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), PS (polystyrene), or mixed resins and are not marked as CRV containers. When marked for identification, these bottles bear the number 3, 4, 5, 6, or 7 in the triangular recycling symbol. Examples include bottles for shampoo, and vitamins.
42 #3-#7 Other Containers – CRV	#3-#7 Other Containers – CRV means plastic containers (other than bottles) made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), PS (polystyrene), or mixed resins and are marked as CRV containers. When marked for identification, these items bear the number 3, 4, 5, 6, or 7 in the triangular recycling symbol.
43 #3-#7 Other Containers – Non-CRV	#3-#7 Other Containers – Non-CRV means plastic containers (other than bottles) made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), PS (polystyrene), or mixed resins and are not marked as CRV containers. When marked for identification, these items bear the number 3, 4, 5, 6, or 7 in the triangular recycling symbol.
44 Recyclable Plastic Film	Recyclable Plastic Film means clean plastic film that can be recycled. Examples include; clean plastic bags sold for use as trash bags for residential and commercial use. It also includes plastic shopping bags used to contain merchandise for transport from the place of purchase and given out by the store with the purchase, such as grocery shopping bags, other merchandise bags, or dry-cleaning plastic bags intended for one-time use. This material also includes non-bag commercial and industrial packaging film such as shrink-wrap, mattress bags, furniture wrap, and film bubble wrap. Examples include agricultural film (films used in various farming and growing applications, such as silage greenhouse films, mulch films, and wrap for hay bales), plastic sheeting used as drop cloths, and building wrap.
45 Nonrecyclable Film	Nonrecyclable Film means all other plastic film that does not fit into any other type. Examples include other types of plastic bags (sandwich bags, zipper-recloseable bags, newspaper bags, produce bags, frozen vegetable bags, bread bags), food wrappers such as candy-bar wrappers, mailing pouches, bank bags, X-ray film, metallized film (wine containers and balloons), plastic food wrap, and contaminated recyclable plastic film.

PLASTIC (continued)

Material ID & Name	Material Type Definition
46 Durable Plastic Items	Durable Plastic Items means all other plastic objects other than containers, or film plastic. Examples include mop buckets, plastic outdoor furniture, plastic toys, large paint/food buckets, CD's, plastic stay straps, sporting goods, and plastic house wares such as dishes, cups, and cutlery. This type also includes building materials such as house siding, window sashes and frames, housings for electronics (such as computers, televisions and stereos), fan blades, impact-resistance cases (e.g. tool boxes, first aid boxes, tackle boxes, sewing kits, etc.), and plastic pipes and fittings.
47 Remainder/ Composite Plastic	Remainder/Composite Plastic means plastic that cannot be put in any other type. They are usually recognized by their optical opacity. This type includes items made mostly of plastic but combined with other materials. Examples include auto parts made of plastic attached to metal, plastic drinking straws, foam drinking cups, produce trays, foam meat and pastry trays, foam packing blocks, packing peanuts, foam plates and bowls, plastic strapping, plastic lids, some kitchen ware, toys, new plastic laminate (e.g., Formica), vinyl, linoleum, plastic lumber, insulating foams, imitation ceramics, handles and knobs, plastic string (such as is used for hay bales), and plastic rigid bubble/foil packaging (as for medications).

ORGANIC

Material ID & Name	Material Type Definition
48 Food	Food means food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food. This includes material from industrial, commercial, or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. Also includes grape pomace and other processed residues or material from canneries, wineries, or other industrial sources.
49 Leaves and Grass	Leaves and Grass means plant material, except woody material, from any public or private landscapes. Examples include leaves, grass clippings, sea weed, and plants. This type does not include woody material or material from agricultural sources.
50 Prunings and Trimmings	Prunings and Trimmings means woody plant material up to 4 inches in diameter from any public or private landscape. Examples include prunings, shrubs, and small branches with branch diameters that do not exceed 4 inches. This type does not include stumps, tree trunks, or branches exceeding 4 inches in diameter. This type does not include material from agricultural sources.

ORGANIC (continued)

Material ID & Name		Material Type Definition
51	Branches and Stumps	Branches and Stumps means woody plant material, branches, and stumps that exceed four inches in diameter from any public or private landscape.
52	Agricultural Crop Residues	Agricultural Crop Residues means plant material from agricultural sources. Examples include orchard and vineyard prunings; vegetable by-products from farming,; and residual fruits, vegetables, and other crop remains after usable crop is harvested. This type does not include processed residues from canneries, wineries, or other industrial sources.
53	Manures	Manures means manure and soiled bedding materials from domestic, farm, or ranch animals. Examples include manure and soiled bedding from animal production operations, racetracks, riding stables, animal hospitals, and other sources.
54	Textiles	Textiles means items made of thread, yarn, fabric, or cloth. Examples include clothes, fabric trimmings, draperies, and all natural and synthetic cloth fibers. This type does not include cloth-covered furniture, mattresses, leather shoes, leather bags, or leather belts.
55	Carpet	Carpet means flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material. Does not include carpet padding.
56	Carpet Padding	Carpet Padding means materials used under carpet to provide insulation and padding. Examples include plastic carpet padding, foam carpet padding, felt carpet padding, and other carpet padding.
57	Remainder/ Composite Organics	Remainder/Composite Organics means organic material that cannot be put in any other type or subtype. This type includes items made mostly of organic materials but combined with other materials. Examples include leather items, cork, hemp rope, garden hoses, rubber items, hair, cigarette butts, diapers, feminine hygiene products, wood products (popsicle sticks and toothpicks), sawdust, and animal feces.

CONSTRUCTION & DEMOLITION

Material ID & Name		Material Type Definition
58	Concrete	Concrete means a hard material made from sand, gravel, aggregate, cement mix, and water. Examples include pieces of building foundations, concrete paving, and cinder blocks.
59	Asphalt Paving	Asphalt Paving means a black or brown, tar-like material mixed with aggregate used as a paving material.
60	Asphalt Roofing	Asphalt Roofing means composite shingles and other roofing material made with asphalt. Examples include asphalt shingles and attached roofing tar and tar paper.

CONSTRUCTION & DEMOLITION (continued)

Material ID & Name		Material Type Definition
61	Clean recyclable wood (non-treated)	Clean recyclable wood (non-treated) means non-treated processed wood for building, manufacturing, landscaping, packaging, and non-treated processed wood from demolition. Examples include dimensional lumber, lumber cutoffs, engineered wood such as plywood and particleboard, wood scraps, pallets, crates, wood fencing, wood shake roofing, and wood siding. May contain nails or other trace contaminants.
62	Other Recyclable Wood	Other Recyclable Wood means unpainted, unstained, or untreated recyclable wood not included in any other category. May be recycled into ethanol, adhesives, or other engineered wood products. Includes plywood, sheet board, wafer board, particle board, oriented strand board, furniture, or cabinets that have not been treated with paint, stain, or other finish, or untreated/unpainted wood roofing or siding.
63	Treated Wood Waste	Treated Wood Waste means wood that has had an external coating applied or has been pressure treated, chemically treated, or treated with creosote. Includes items such as handrails; finished furniture; pressure treated wood; chemically treated wood (with copper etc.); finished wood flooring (Pergo); or wood treated with creosote such as railroad ties, marine timbers and pilings, landscape timbers, or telephone poles.
64	Clean Gypsum Board	Clean Gypsum Board means interior wall covering made of a sheet of gypsum sandwiched between paper layers that are not painted. Examples include used or unused, broken or whole sheets of sheetrock, drywall, gypsum board, plasterboard, gypboard, gyproc, and wallboard.
65	Rock, Soil, and Fines	Rock, Soil and Fines means rock pieces of any size and soil, dirt, and other matter. Examples include rock, stones, and sand, clay, soil, and other fines. This type also includes non-hazardous contaminated soil.
66	Remainder/Composite Construction and Demolition	Remainder/Composite Construction and Demolition means construction and demolition material that cannot be put in any other type. This type may include items from different categories combined, which would be very hard to separate. Examples include brick, ceramics, tiles, toilets, sinks, dried paint not attached to other materials, and fiberglass insulation. This type may also include demolition debris that is a mixture of items such as plate glass, wood, tiles, painted gypsum board, and aluminum scrap.

HAZARDOUS & ELECTRONIC WASTE

Material ID & Name		Material Type Definition
67	Paint	Paint means containers with paint in them. Examples include latex paint, oil based paint, and tubes of pigment or fine art paint. This type does not include dried paint, empty paint cans, or empty aerosol containers.
68	Vehicle and Equipment Fluids	Vehicle and Equipment Fluids means containers with fluids used in vehicles or engines, except used oil. Examples include used antifreeze and brake fluid. This type does not include empty vehicle and equipment fluid containers.

HAZARDOUS & ELECTRONIC WASTE (continued)

Material ID & Name		Material Type Definition
69	Used Oil and Oil Filters	Used Oil and Oil Filters means the same as defined in Health and Safety Code section 25250.1(a). Examples include spent lubricating oil such as crankcase and transmission oil, gear oil, and hydraulic oil. Oil filters means metal oil filters used in motor vehicles and other engines, which contain a residue of used oil.
70	Large Rechargeable Batteries	Large Rechargeable Batteries means large rechargeable or lead acid batteries. Examples include car battery and other vehicle batteries.
71	Small Rechargeable Batteries	Small Rechargeable Batteries means small rechargeable batteries typically used in consumer devices. Examples include rechargeable flashlight and small appliance batteries.
72	Household Batteries	Household Batteries means non-rechargeable batteries typically used in consumer devices. Examples include alkaline, carbon/zinc batteries, watch, and hearing aid batteries
73	Universal Waste	Universal Waste means electronics with large circuitry that is computer-related. Examples include processors, mice, keyboards, laptops, disk drives, printers, modems, and fax machines, stereos, VCRs, microwaves, DVD players (screen smaller than 4 inches), radios, audio/visual equipment. Examples include personal digital assistants (PDAs), cell phones, phone systems, phone answering machines, computer games and other electronic toys, portable CD players, camcorders, and digital cameras.
74	Covered Electronic Waste	Covered Electronic Waste means electronic devices that the Department of Toxic Substances Control has determined to be hazardous when discarded as part of the Electronic Waste Recycling Act, including video display devices. Examples include televisions, computer monitors, and other items containing a cathode ray tube (CRT). Also includes LCD desktop monitors, laptops with LCD displays, LCD televisions, and portable DVD players with screens that are 4 inches or larger (measured diagonally).
75	Fluorescent Tubes	Fluorescent Tubes means fluorescent light tubes and compact fluorescent bulbs (CFL).
76	Other HHW	Other HHW means other hazardous wastes not described elsewhere in these definitions. Examples include pesticides, solvents, propane, and pharmaceuticals.
77	Remainder/ Composite Hazardous and E-waste	Remainder/Composite Hazardous & E-Waste means household hazardous material that cannot be put in any other type. This type also includes household hazardous material that is mixed. Examples include household hazardous waste which if improperly put in the solid waste stream may present handling problems or other hazards, such as pesticides, caustic cleaners, and fluorescent light bulbs.

SPECIAL WASTE

Material ID & Name		Material Type Definition
78	Ash	Ash means a residue from the combustion of any solid or liquid material. Examples include ash from structure fires, fireplaces, incinerators, biomass facilities, waste-to-energy facilities, and barbecues.
79	Sewage Solids	Sewage Solids means residual solids and semi-solids from the treatment of domestic waste water or sewage. Examples include biosolids, sludge, grit, screenings, and septage. This type does not include sewage or waste water discharged from the sewage treatment process.
80	Industrial Sludge	Industrial Sludge means sludge from factories, manufacturing facilities, and refineries. Examples include paper pulp sludge, and water treatment filter cake sludge.
81	Treated Medical Waste	Treated Medical Waste means medical waste that has been processed in order to change its physical, chemical, or biological character or composition, or to remove or reduce its harmful properties or characteristics, as defined in Section 25123.5 of the California Health and Safety Code.
82	Bulky Items	Bulky Items means large, hard-to-handle items that are not defined separately, including furniture, mattresses, and other large items. Examples include all sizes and types of furniture, mattresses, box springs, and base components.
83	Tires	Tires means vehicle tires. Examples include tires from trucks, automobiles, motorcycles, heavy equipments, and bicycles.
84	Remainder/Composite Special Waste	Remainder/Composite Special Waste means special waste that cannot be put in any other type. Examples include asbestos-containing materials, such as certain types of pipe insulation and floor tiles, auto fluff, auto-bodies, trucks, trailers, truck cabs, untreated medical waste/pills/hypodermic needles, and artificial fireplace logs.

MIXED RESIDUE

Material ID & Name		Material Type Definition
85	Mixed Residue	Mixed Residue means material that cannot be put in any other type in the other categories. This type includes mixed residue that cannot be further sorted. Examples include clumping kitty litter and residual material from a materials recovery facility or other sorting process that cannot be put in any of the previous remainder/composite types.

Material List and Definitions for Visual Characterization

Material List for Visual Characterization

Visual Characterization Material List	
PAPER	
1	Uncoated Corrugated Cardboard
2	Paper Bags/Kraft
3	Newspaper
4	White Ledger
5	Colored Ledger
6	Computer Paper
7	Other Office Paper
8	Magazines and Catalogs
9	Phone Books and Directories
10	Other Recyclable Paper
11	Other Compostable Paper
12	Remainder/ Composite Paper
GLASS	
13	Clear Glass Bottles and Containers
14	Green Glass Bottles and Containers
15	Brown Glass Bottles and Containers
16	Other Colored Glass Bottles and Containers
17	Flat Glass
18	Remainder/ Composite Glass
METAL	
19	Tin/Steel Cans
20	Major Appliances
21	Other Ferrous
22	Aluminum Cans
23	Other Non-Ferrous
24	Remainder/ Composite Metal
PLASTIC	
25	PETE Bottles
26	Other PETE Containers
27	HDPE Natural Bottles
28	HDPE Colored Bottles
29	Other HDPE Containers
30	#3-#7 Bottles

Visual Characterization Material List	
31	#3-#7 Other Containers
32	Recyclable Plastic Film
33	Non-recyclable Film
34	Durable Plastic Items
35	Remainder/ Composite Plastic
ORGANIC	
36	Food
37	Leaves and Grass
38	Prunings and Trimmings
39	Branches and Stumps
40	Agricultural Crop Residues
41	Manures
42	Textiles
43	Carpet
44	Carpet Padding
45	Remainder/ Composite Organics
CONSTRUCTION & DEMOLITION	
46	Concrete
47	Asphalt Paving
48	Asphalt Roofing
49	Clean recyclable wood (non-treated)
50	Other Untreated/ Recyclable Wood
51	Treated Wood Waste
52	Clean Gypsum Board
53	Rock, Soil, and Fines
54	Remainder/ Composite Construction and Demolition
HAZARDOUS & E-WASTE	
55	Paint
56	Vehicle and Equipment Fluids
57	Used Oil and Oil Filters
58	Large Rechargeable Batteries
59	Small Rechargeable Batteries
60	Household Batteries
61	Universal Waste
62	Covered Electronic Waste
63	Fluorescent Tubes
64	Other HHW

Visual Characterization Material List	
65	Remainder/ Composite Hazardous and E-waste
SPECIAL WASTE	
66	Ash
67	Sewage Solids
68	Industrial Sludge
69	Treated Medical Waste
70	Bulky Items
71	Tires
72	Remainder/ Composite Special Waste
MIXED RESIDUE	
73	Mixed Residue

Material Definitions for Visual Characterization

Visual Characterization Material List		
PAPER		
Material ID & Name	Material Type Definition	
1	Uncoated Corrugated Cardboard	Uncoated Corrugated Cardboard usually has three layers. The center wavy layer is sandwiched between the two outer layers. It does not have any wax coating on the inside or outside. Examples include entire cardboard containers, such as shipping and moving boxes, computer packaging cartons, and sheets and pieces of boxes and cartons. This type does not include chipboard.
2	Paper Bags/Kraft	Paper Bags means bags and sheets made from Kraft paper. Examples include paper grocery bags, fast food bags, department store bags, and heavyweight sheets of Kraft packing paper.
3	Newspaper	Newspaper means paper used in newspapers. Examples include newspaper and glossy inserts, and all items made from newsprint, such as free advertising guides, election guides, plain news packing paper, stapled college schedules of classes, and tax instruction booklets.
4	White Ledger	White Ledger means uncolored bond, rag, or stationary grade paper. It may have colored ink on it. When the paper is torn, the fibers are white. Examples include white photocopy, white laser print, and letter paper.
5	Colored Ledger	Colored Ledger means colored bond, rag, or stationery grade paper. When the paper is torn, the fibers are colored throughout. Examples include colored photocopy and letter paper. This type does not include fluorescent dyed paper or deep-tone dyed paper such as goldenrod colored paper.
6	Computer Paper	Computer Paper means paper used for computer printouts. This type usually has a strip of form feed holes along two edges. If there are no holes, then the edges show tear marks. This type can be white or striped. Examples include computer paper and printouts from continuous feed printers. This type does not include "white ledger" used in laser or impact printers, or computer paper containing groundwood.
7	Other Office Paper	Other Office Paper means other kinds of paper used in offices. Examples include manila folders, manila envelopes, index cards, white envelopes, white window envelopes, white or colored notebook paper, carbonless forms, and junk mail. This type does not include "white ledger," "colored ledger," or "computer paper."
8	Magazines and Catalogs	Magazines and Catalogs means items made of glossy coated paper. This paper is usually slick, smooth to the touch, and reflects light. Examples include glossy magazines, catalogs, brochures, and pamphlets.
9	Phone Books and Directories	Phone Books and Directories means thin paper between coated covers. These items are bound along the spine with glue. Examples include whole or damaged telephone books, "yellow pages," real estate listings, and some non-glossy mail order catalogs.

PAPER (continued)

Material ID & Name	Material Type Definition
10 Other Recyclable Paper	Other Recyclable Paper means items made mostly of paper that do not fit into any of the above types. Paper may be combined with minor amounts of other materials such as wax or glues. This type includes items made of chipboard, groundwood paper, and deep-toned or fluorescent dyed paper. Examples include cereal and cracker boxes, unused paper plates and cups, goldenrod colored paper, school construction paper/butcher paper, milk cartons, ice cream cartons and other frozen food boxes, unopened junk mail, colored envelopes for greeting cards, pulp paper egg cartons, unused pulp paper plant pots, and hardcover and softcover books.
11 Other Compostable Paper	Other Compostable Paper means items that were soiled with food or water during use. This type includes paper towels, paper plates, waxed paper, tissues, waxed corrugated cardboard, fast food wrappers, waxed paper, and other papers (e.g., pizza boxes and pizza box inserts).
12 Remainder/ Composite Paper	Remainder/Composite Paper means items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, food, and moisture. Examples include aseptic packages, blueprints, sepia, onion skin, carbon paper, self-adhesive notes, and photographs.

GLASS

Material ID & Name	Material Type Definition
13 Clear Glass Bottles and Containers	Clear Glass Bottles and Containers means clear glass beverage and food containers with or without a California Redemption Value (CRV) label. Examples include whole or broken clear soda and beer bottles, fruit juice bottles, peanut butter jars, and mayonnaise jars.
14 Green Glass Bottles and Containers	Green Glass Bottles and Containers means green-colored glass containers with or without a CRV label. Examples include whole or broken green soda and beer bottles, and whole or broken green wine bottles.
15 Brown Glass Bottles and Containers	Brown Glass Bottles and Containers means brown-colored glass containers with or without a CRV label. Examples include whole or broken brown soda and beer bottles, and whole or broken brown wine bottles.
16 Other Colored Glass Bottles and Containers	Other Colored Glass Bottles and Containers means colored glass containers and bottles other than green or brown with or without a CRV label. Examples include whole or broken blue or other colored bottles and containers.

GLASS (continued)

Material ID & Name		Material Type Definition
17	Flat Glass	Flat Glass means clear or tinted glass that is flat. Examples include glass windowpanes, doors, and tabletops, flat automotive window glass (side windows), safety glass, and architectural glass. This type does not include windshields, laminated glass, or any curved glass.
18	Remainder/Composite Glass	Remainder/Composite Glass means glass that cannot be put in any other type. It includes items made mostly of glass but combined with other materials. Examples include Pyrex, Corningware, crystal and other glass tableware, mirrors, non-fluorescent light bulbs, and auto windshields.

METAL

Material ID & Name		Material Type Definition
19	Tin/Steel Cans	Tin/Steel Cans means rigid containers made mainly of steel. These items will stick to a magnet and may be tin-coated. This type is used to store food, beverages, paint, and a variety of other household and consumer products. Examples include canned food and beverage containers, empty metal paint cans, empty spray paint and other aerosol containers, and bimetal containers with steel sides and aluminum ends.
20	Major Appliances	Major Appliances means discarded major appliances of any color. These items are often enamel-coated. Examples include washing machines, clothes dryers, hot water heaters, stoves, and refrigerators. This type does not include electronics, such as televisions and stereos.
21	Other Ferrous	Other Ferrous means any iron or steel that is magnetic or any stainless steel item. This type does not include "tin/steel cans." Examples include structural steel beams, metal clothes hangers, metal pipes, stainless steel cookware, security bars, used oil filters, and scrap ferrous items.
22	Aluminum Cans	Aluminum Cans means any food or beverage container made mainly of aluminum. Examples include aluminum soda or beer cans, and some pet food cans. This type does not include bimetal containers with steel sides and aluminum ends.
23	Other Non-Ferrous	Other Non-Ferrous means any metal item, other than aluminum cans, that is not stainless steel and that is not magnetic. These items may be made of aluminum, copper, brass, bronze, lead, zinc, or other metals. Examples include aluminum window frames, aluminum siding, copper wire, shell casings, brass pipe, and aluminum foil.
24	Remainder/Composite Metal	Remainder/Composite Metal means metal that cannot be put in any other type. This type includes items made mostly of metal but combined with other materials and items made of both ferrous metals and non-ferrous metal combined. Examples include small non-electronic appliances such as toasters and hair dryers, motors, insulated wire, and finished products that contain a mixture of metals, or metals and other materials, whose weight is derived significantly from the metal portion of its construction.

PLASTIC

Material ID & Name		Material Type Definition
25	PETE Bottles	PETE Bottles means clear or colored PETE (polyethylene terephthalate) bottles. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. The color is usually clear, transparent green or amber. A PETE bottle usually has a small dot left from the manufacturing process, not a seam. It does not turn white when bent. Examples of narrow and wide neck bottles include: soft drink, water, and liquor bottles, cooking oil, pastry jars, food jars, and aspirin bottles.
26	Other PETE Containers	Other PETE Containers means PETE (polyethylene terephthalate) containers (other than bottles). When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. A PETE container usually has a small dot left from the manufacturing process, not a seam. Examples include black frozen food trays, food and non-food clamshell packaging.
27	HDPE Natural Bottles	HDPE Natural Bottles means natural HDPE (high-density polyethylene) bottles. This plastic is cloudy white, allowing light to pass through it. When marked for identification, it bears the number 2 in the triangular recycling symbol. Examples include milk jugs, water jugs, and some juice bottles.
28	HDPE Colored Bottles	HDPE Colored Bottles means colored HDPE (high-density polyethylene) containers. This plastic is a solid color, preventing light from passing through it. When marked for identification, it bears the number 2 in the triangular recycling symbol. Examples include detergent bottles, some shampoo and hair-care bottles, empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid bottles, and narrow and wide mouth food containers, such as for coffee and coffee creamer.
29	Other HDPE Containers	Other HDPE Containers means all types of HDPE (high-density polyethylene) containers not included above. When marked for identification, they bear the number 2 in the triangular recycling symbol. Examples include some margarine, cottage cheese, yogurt tubs, and buckets, including 5-gallon buckets.
30	#3-#7 Bottles	#3-#7 Bottles means plastic bottles made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), PS (polystyrene), or mixed resins. When marked for identification, these bottles bear the number 3, 4, 5, 6, or 7 in the triangular recycling symbol. Examples include bottles for some salad dressings, vegetable oils, juices, syrup, shampoo, and vitamins.

PLASTIC (continued)

Material ID & Name	Material Type Definition
31 #3-#7 Other Containers	#3-#7 Other Containers means plastic containers (other than bottles) made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), PS (polystyrene), or mixed resins. When marked for identification, these items bear the number 3, 4, 5, 6, or 7 in the triangular recycling symbol. Examples include food containers such as flexible and brittle yogurt cups, some margarine tubs, microwave food trays, clamshell-shaped fast food or muffin containers, and foam egg cartons.
32 Recyclable Plastic Film	Recyclable Plastic Film means clean plastic film that can be recycled. Examples include; clean plastic bags sold for use as trash bags, for both residential and commercial use. Also Includes plastic shopping bags used to contain merchandise to transport from the place of purchase, given out by the store with the purchase like grocery shopping bags, other merchandise bags, or dry-cleaning plastic bags intended for 1-time use. This material also includes non-bag commercial and industrial packaging film such as shrink-wrap, mattress bags, furniture wrap, and film bubble wrap. Plastic film used for purposes other than packaging are also included in this category. Examples include agricultural film (films used in various farming and growing applications, such as silage greenhouse films, mulch films, and wrap for hay bales), plastic sheeting used as drop cloths, and building wrap.
33 Nonrecyclable Film	Nonrecyclable Film means all other plastic film that does not fit into any other type. Examples include other types of plastic bags (sandwich bags, zipper-recloseable bags, newspaper bags, produce bags, frozen vegetable bags, bread bags), food wrappers such as candy-bar wrappers, mailing pouches, bank bags, X-ray film, metallized film (wine containers and balloons), plastic food wrap, and contaminated recyclable plastic film.
34 Durable Plastic Items	Durable Plastic Items means all other plastic objects other than containers, or film plastic. Examples include mop buckets, plastic outdoor furniture, plastic toys, large paint/food buckets, CD's, plastic stay straps, sporting goods, and plastic house wares such as dishes, cups, and cutlery. This type also includes building materials such as house siding, window sashes and frames, housings for electronics (such as computers, televisions and stereos), fan blades, impact-resistance cases (e.g. tool boxes, first aid boxes, tackle boxes, sewing kits, etc.), and plastic pipes and fittings.

PLASTIC (continued)

Material ID & Name	Material Type Definition
35 Remainder/ Composite Plastic	Remainder/Composite Plastic means plastic that cannot be put in any other type. They are usually recognized by their optical opacity. This type includes items made mostly of plastic but combined with other materials. Examples include auto parts made of plastic attached to metal, plastic drinking straws, foam drinking cups, produce trays, foam meat and pastry trays, foam packing blocks, packing peanuts, foam plates and bowls, plastic strapping, plastic lids, some kitchen ware, toys, new plastic laminate (e.g., Formica), vinyl, linoleum, plastic lumber, insulating foams, imitation ceramics, handles and knobs, plastic string (such as is used for hay bales), and plastic rigid bubble/foil packaging (as for medications).

ORGANIC

Material ID & Name	Material Type Definition
36 Food	Food means food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food. This type includes material from industrial, commercial, or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. This type includes grape pomace and other processed residues or material from canneries, wineries, or other industrial sources.
37 Leaves and Grass	Leaves and Grass means plant material, except woody material, from any public or private landscapes. Examples include leaves, grass clippings, sea weed, and plants. This type does not include woody material or material from agricultural sources.
38 Prunings and Trimmings	Prunings and Trimmings means woody plant material up to 4 inches in diameter from any public or private landscape. Examples include prunings, shrubs, and small branches with branch diameters that do not exceed 4 inches. This type does not include stumps, tree trunks, or branches exceeding 4 inches in diameter. This type does not include material from agricultural sources.
39 Branches and Stumps	Branches and Stumps means woody plant material, branches, and stumps that exceed four inches in diameter from any public or private landscape.
40 Agricultural Crop Residues	Agricultural Crop Residues means plant material from agricultural sources. Examples include orchard and vineyard prunings, vegetable by-products from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. This type does not include processed residues from canneries, wineries, or other industrial sources.
41 Manures	Manures means manure and soiled bedding materials from domestic, farm, or ranch animals. Examples include manure and soiled bedding from animal production operations, racetracks, riding stables, animal hospitals, and other sources.

ORGANIC (continued)

Material ID & Name		Material Type Definition
42	Textiles	Textiles means items made of thread, yarn, fabric, or cloth. Examples include clothes, fabric trimmings, draperies, and all natural and synthetic cloth fibers. This type does not include cloth-covered furniture, mattresses, leather shoes, leather bags, or leather belts.
43	Carpet	Carpet means flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material. Does not include carpet padding.
44	Carpet Padding	Carpet Padding means materials used under carpet to provide insulation and padding. Examples include plastic carpet padding, foam carpet padding, felt carpet padding, and other carpet padding.
45	Remainder/Composite Organics	Remainder/Composite Organics means organic material that cannot be put in any other type or subtype. This type includes items made mostly of organic materials but combined with other materials. Examples include leather items, cork, hemp rope, garden hoses, rubber items, hair, carpet padding, cigarette butts, diapers, feminine hygiene products, wood products (popsicle sticks and toothpicks), sawdust, and animal feces.

CONSTRUCTION & DEMOLITION

Material ID & Name		Material Type Definition
46	Concrete	Concrete means a hard material made from sand, gravel, aggregate, cement mix, and water. Examples include pieces of building foundations, concrete paving, and cinder blocks.
47	Asphalt Paving	Asphalt Paving means a black or brown, tar-like material mixed with aggregate used as a paving material.
48	Asphalt Roofing	Asphalt Roofing means composite shingles and other roofing material made with asphalt. Examples include asphalt shingles and attached roofing tar and tar paper.
49	Clean recyclable wood (non-treated)	Clean recyclable wood (non-treated) means non-treated processed wood for building, manufacturing, landscaping, packaging, and non-treated processed wood from demolition. Examples include dimensional lumber, lumber cutoffs, engineered wood such as plywood and particleboard, wood scraps, pallets, crates, wood fencing, wood shake roofing, and wood siding. May contain nails or other trace contaminants
50	Other Recyclable Wood	Other Recyclable Wood means unpainted, unstained, or untreated recyclable wood not included in any other category. May be recycled into ethanol, adhesives, or other engineered wood products. Includes plywood, sheet board, wafer board, particle board, oriented strand board, furniture, or cabinets that have not been treated with paint, stain, or other finish, or untreated/unpainted wood roofing or siding.

CONSTRUCTION & DEMOLITION (continued)

Material ID & Name		Material Type Definition
51	Treated Wood Waste	Treated Wood Waste means wood that has had an external coating applied or has been pressure treated, chemically treated, or treated with creosote. Includes items such as handrails; finished furniture; pressure treated wood; chemically treated wood (with copper etc.); finished wood flooring (Pergo); or wood treated with creosote such as railroad ties, marine timbers and pilings, landscape timbers, or telephone poles.
52	Clean Gypsum Board	Clean Gypsum Board means interior wall covering made of a sheet of gypsum sandwiched between paper layers that are not painted. Examples include used or unused, broken or whole sheets of sheetrock, drywall, gypsum board, plasterboard, gypboard, gyproc, and wallboard.
53	Rock, Soil, and Fines	Rock, Soil and Fines means rock pieces of any size and soil, dirt, and other matter. Examples include rock, stones, and sand, clay, soil, and other fines. This type also includes non-hazardous contaminated soil.
54	Remainder/ Composite Construction and Demolition	Remainder/Composite Construction and Demolition means construction and demolition material that cannot be put in any other type. This type may include items from different categories combined, which would be very hard to separate. Examples include brick, ceramics, tiles, toilets, sinks, dried paint not attached to other materials, and fiberglass insulation. This type may also include demolition debris that is a mixture of items such as plate glass, wood, tiles, painted gypsum board, and aluminum scrap.

HAZARDOUS & ELECTRONIC WASTE

Material ID & Name		Material Type Definition
55	Paint	Paint means containers with paint in them. Examples include latex paint, oil based paint, and tubes of pigment or fine art paint. This type does not include dried paint, empty paint cans, or empty aerosol containers.
56	Vehicle and Equipment Fluids	Vehicle and Equipment Fluids means containers with fluids used in vehicles or engines, except used oil. Examples include used antifreeze and brake fluid. This type does not include empty vehicle and equipment fluid containers.
57	Used Oil and Oil Filters	Used Oil and Oil Filters means the same as defined in Health and Safety Code section 25250.1(a). Examples include spent lubricating oil such as crankcase and transmission oil, gear oil, and hydraulic oil. Oil Filters means metal oil filters used in motor vehicles and other engines, which contain a residue of used oil.
58	Large Rechargeable Batteries	Large Rechargeable Batteries means large rechargeable or lead acid batteries. Examples include car battery and other vehicle batteries.
59	Small Rechargeable Batteries	Small Rechargeable Batteries means small rechargeable batteries typically used in consumer devices. Examples include rechargeable flashlight and small appliance batteries.

HAZARDOUS & ELECTRONIC WASTE (continued)

Material ID & Name		Material Type Definition
60	Household Batteries	Household Batteries means non-rechargeable batteries typically used in consumer devices. Examples include alkaline, carbon/zinc batteries, watch, and hearing aid batteries
61	Universal Waste	Universal Waste means electronics with large circuitry that is computer-related. Examples include processors, mice, keyboards, laptops, disk drives, printers, modems, fax machines, stereos, VCRs, microwaves, DVD players (screen smaller than 4 inches), radios, and audio/visual equipment. Other examples include personal digital assistants (PDAs), cell phones, phone systems, phone answering machines, computer games and other electronic toys, portable CD players, camcorders, and digital cameras.
62	Covered Electronic Waste	Covered Electronic Waste means electronic devices the Department of Toxic Substances Control has determined to be hazardous when discarded as part of the Electronic Waste Recycling Act, including video display devices. Examples include televisions, computer monitors, and other items containing a cathode ray tube (CRT). Also includes LCD desktop monitors, laptops with LCD displays, LCD televisions, and portable DVD players with screens that are 4 inches or larger (measured diagonally).
63	Fluorescent Tubes	Fluorescent Tubes means fluorescent light tubes and compact fluorescent bulbs (CFL).
64	Other HHW	Other HHW means other hazardous wastes not described elsewhere in these definitions. Examples include pesticides, solvents, propane, and pharmaceuticals.
65	Remainder/ Composite Hazardous and E-waste	Remainder/Composite Hazardous & E-Waste means household hazardous material that cannot be put in any other type. This type also includes household hazardous material that is mixed. Examples include household hazardous waste which if improperly put in the solid waste stream may present handling problems or other hazards, such as pesticides, caustic cleaners, and fluorescent light bulbs.

SPECIAL WASTE

Material ID & Name		Material Type Definition
66	Ash	Ash means a residue from the combustion of any solid or liquid material. Examples include ash from structure fires, fireplaces, incinerators, biomass facilities, waste-to-energy facilities, and barbecues.
67	Sewage Solids	Sewage Solids means residual solids and semi-solids from the treatment of domestic waste water or sewage. Examples include biosolids, sludge, grit, screenings, and septage. This type does not include sewage or waste water discharged from the sewage treatment process.
68	Industrial Sludge	Industrial Sludge means sludge from factories, manufacturing facilities, and refineries. Examples include paper pulp sludge, and water treatment filter cake sludge.

SPECIAL WASTE (continued)

Material ID & Name		Material Type Definition
69	Treated Medical Waste	Treated Medical Waste means medical waste that has been processed in order to change its physical, chemical, or biological character or composition, or to remove or reduce its harmful properties or characteristics, as defined in Section 25123.5 of the California Health and Safety Code.
70	Bulky Items	Bulky Items means large hard-to-handle items that are not defined separately, including furniture, mattresses, and other large items. Examples include all sizes and types of furniture, mattresses, box springs, and base components.
71	Tires	Tires means vehicle tires. Examples include tires from trucks, automobiles, motorcycles, heavy equipments, and bicycles.
72	Remainder/Composite Special Waste	Remainder/Composite Special Waste means special waste that cannot be put in any other type. Examples include asbestos-containing materials, such as certain types of pipe insulation and floor tiles, auto fluff, auto-bodies, trucks, trailers, truck cabs, untreated medical waste/pills/hypodermic needles, and artificial fireplace logs.

MIXED RESIDUE

Material ID & Name		Material Type Definition
73	Mixed Residue	Mixed Residue means material that cannot be put in any other type in the other categories. This type includes mixed residue that cannot be further sorted. Examples include clumping kitty litter and residual material from a materials recovery facility or other sorting process that cannot be put in any of the previous remainder/composite types.

Appendix B. Waste Sort Study Methodology

The sampling plan was designed to obtain samples from each waste sector according to the targeted numbers shown in Table 7. Four solid waste facilities were included in sampling activities: Central Landfill, Healdsburg Transfer Station, Sonoma Transfer Station, and Redwood Landfill.

Table 7. Sampling Targets

Waste Sector	Target Number of Samples	Target Samples per Season
Commercially collected residential waste	125	62 - 63
Commercially collected commercial waste	125	62 - 63
Self-hauled waste	300	150

Samples were distributed among the three transfer stations and one landfill, such that all disposal facilities were represented. Only full days of sampling activity were assigned to each facility. Sampling activity took place during two seasons, a wet season (March 20-28, 2007) and a dry season (July 10-19, 2007). Sample targets were adjusted for the dry season to account for any over-sampling or under-sampling of waste sectors that occurred during the wet season.

In addition, sampling was conducted in a way that represented all ten jurisdictions. For residential and commercial waste, the approach was to pre-select vehicles serving residential and commercial collection routes that represent each jurisdiction. To the extent allowed by the need to meet sampling targets and the desire to represent all jurisdictions, routes and vehicles were pre-selected on a random basis. For self-haul waste, this was achieved by selecting self-haul vehicles through a systematic selection process at the entrances of the facilities.

A summary table, shown below, indicates the haulers and jurisdictions that dispose of waste at each of the four facilities included in this study.

	Cloverdale	Healdsburg	Town of Windsor	Santa Rosa	Sebastopol	Cotati	Rohnert Park	Petaluma	Sonoma	Unincorporated areas
Redwood Landfill										
Empire Waste Management					X	X				X
North Bay Corporation										
Green Waste Recovery								X		
Sonoma Garbage Collectors										
Central Landfill										
Empire Waste Management										
North Bay Corporation				X			X			X
Green Waste Recovery										
Sonoma Garbage Collectors										
Healdsburg Transfer Station										
Empire Waste Management	X	X								X
North Bay Corporation			X							X
Green Waste Recovery										
Sonoma Garbage Collectors										
Sonoma Transfer Station										
Empire Waste Management										X
North Bay Corporation				X						X
Green Waste Recovery										
Sonoma Garbage Collectors								X		

Information was requested from the County's four private waste haulers in order to establish lists of residential and commercial collection routes associated with particular sampling days at each facility. A sampling calendar (i.e., a schedule) was established for each sampling season based on the availability of residential and commercial routes at each facility on particular days.

Selection of Scheduled, Commercially Collected Loads for Sampling

Scheduled collection routes were classified as residential, commercial, or "mixed" and only residential or commercial scheduled routes were eligible for inclusion in the sampling process. Routes that included waste from a mixture of businesses and single-family residences were excluded from the selection pool. A separate procedure was developed to select loads of commercial waste delivered in unscheduled "on-call" roll-off boxes or debris boxes as well as loads from the self-hauled waste sector.

For selected sampling days at each facility, the County provided the consultant team with a list of existing residential and commercial collection routes and scheduled roll-off and compactor deliveries from each hauler. For each sampling day, scheduled residential and commercial collection routes were chosen at random from the list. The set of chosen routes was then evaluated to verify that the waste from all appropriate jurisdictions was represented among the routes. If all jurisdictions were not represented and additional routes were available, then some routes from jurisdictions that were "overrepresented" were discarded from the selection pool, and additional randomly selected routes were added. This process continued until adequate representation of jurisdictions was achieved.

During the dry season the consultant team requested a complete record of the weekly route schedule for each hauler in order to select the days to visit each facility for sampling. This was done to make sure enough commercial and residential vehicles were sampled, since we learned from the first season that some sites receive more commercial or residential loads than others on certain days of the week.

For both seasons a list of targeted commercial and residential scheduled routes was constructed for each sampling day. The list represented the routes that were intended to be sampled on each day. For purposes of contingency planning, two to four additional routes of each type were identified for each sampling day. The sampling crew manager had discretion to select any routes from among those on the list (or vehicles that were not on the list if special circumstances made it necessary) until the targeted number of samples was reached for each waste sector.

On the afternoon prior to each sampling day, the Sonoma County Waste Management Agency contacted the haulers to determine whether there had been any changes in the assignment of specific trucks for the residential and commercial routes that had been scheduled for sampling. Any changes in truck assignments were communicated to the sampling manager.

For the routes selected for each scheduled day and facility, the following information was compiled for use during the process of capturing samples:

- the waste sector (residential or commercial);
- the hauling company;
- the route number;
- the truck number;

- the day of the week;
- the expected time of arrival at the solid waste facility (e.g., morning or afternoon, if known)
- the trip number (first, second, or third trip of the day, where applicable);
- the type of vehicle or container (packer truck, roll-off, or compactor unit).

The gatehouse staff identified and directed selected vehicles to the sampling crew using a list of eligible routes provided by Cascadia. For each sampling day, the list contained separate sections for residential routes and commercial routes. On sampling days, gatehouse staff were asked to compare all arriving loads of commercially collected waste against the list of eligible vehicles, and then to direct eligible vehicles to the sorting area. Gatehouse staff were also asked to place a brightly colored sample placard on the windshield of each selected vehicle, in order to make it visible to the sampling crew.

The manager of the sampling crew had a list of the eligible routes and vehicles for each day. When a commercial or residential load was directed to the sampling crew, the sampling crew manager verified the vehicle against his list and verified that the vehicle contained the correct type of waste from the expected jurisdiction. The vehicle's entry on the selection list was then "checked off" as a record that it had been sampled. In addition, the sampling crew manager wrote the route number and the waste sector on the *Hand Sort Waste Tally Form*.

Selection of Self-hauled Vehicles and Unscheduled Commercially-Collected Roll-off Containers for Sampling

For each sampling day at the County-operated facilities, the sampling crew manager was provided with a list of the numbers and types of self-hauled vehicles that were to be obtained on that day. Self-hauled and unscheduled loads were not sampled at the Redwood facility. The list did not describe individual targeted vehicles, but it provided daily quotas and a sequence in which to obtain the different types of samples. In addition, the list called for obtaining up to two unscheduled, commercially-collected roll-off container or debris box on each weekday.

As the sampling day progressed, the sampling crew manager used the list to determine which type of vehicle to instruct the scalehouse staff to send next to the sampling area. Typically, the list alternated between calling for a small self-hauled load to be sent, followed by two large self-hauled loads, and then another small self-hauled load, etc. One unscheduled commercial roll-off container or debris box also was placed at a randomly chosen location on the list.

The sampling crew manager proceeded through the list one vehicle at a time, each time instructing the scalehouse staff to select and send a vehicle of the designated type. When the characterization team had finished with one vehicle load or when there was enough room in the sampling area to accommodate the tipping of an additional vehicle load, the sampling crew manager instructed the scalehouse staff to send the next vehicle of the type called for on the list.

Self-hauled loads were stratified according to two sizes – large vehicle and small vehicle. Large self-hauled vehicles correspond to the scalehouse recordkeeping categories of "loose" and "debris box," while small self-hauled vehicles correspond to the scalehouse categories of "car" and "pick-up." All self-hauled loads were characterized visually. (However, the unscheduled commercially-collected roll-off or debris box that was identified for most sampling days was

characterized by hand-sorting a 200-pound sample, in a manner consistent with the sorting of other commercial waste samples.)

The specific method for selecting self-hauled loads and commercially-hauled roll-off and debris box loads was as follows:

- 1) At approximately the beginning of each sampling day, after a sufficient number of residential and commercial samples had been captured and prepared for sorting, the sampling crew manager instructed gatehouse staff to identify the next eligible large or small self-hauled vehicle entering the facility and to direct that vehicle to the sampling crew.
- 2) The scalehouse staff person queried the driver of the next large or small self-hauled vehicle that arrived, verifying that it met the following conditions:
 - The vehicle was delivering waste that was generated in Sonoma County.
 - The vehicle was not operated by a hauling company. (If operated by a landscaping or cleaning company, the vehicle must bear waste that was generated as a result of the activity of that company.)
- 3) If the vehicle met the conditions described in step 2, above, the scalehouse staff person placed a Sample Placard on the vehicle's windshield. The scalehouse staff person then directed the driver to take the vehicle to the sampling area and tip the load on the floor of the transfer station in the designated sampling area.
- 4) When the selected vehicle arrived at the sampling area, the sampling crew manager briefly removed the sample placard from the vehicle's windshield and wrote the date, sample number, and the size of the self-hauled load (large or small) on the placard. The sampling crew manager then placed the placard back on the windshield for later collection by the scalehouse staff person. The sampling manager instructed the driver to weigh out and deliver the sample placard back to the scalehouse staff person.
- 5) The load was tipped in an area where the sampling crew had adequate room to walk around and observe it undisturbed for several minutes while recording estimates of waste composition. (The process of characterizing the load is described in the next section.)
- 6) After tipping the load, the vehicle went back to the scalehouse with the sample placard still on its windshield. The scalehouse staff person instructed the driver to weigh the vehicle out and collected the sample placard from the windshield. The scalehouse staff person wrote the transaction number and the net weight on the sample placard.
- 7) When the characterization process had been finished for the load, or when there was enough room for an additional self-haul load to be tipped in the sorting area, the sampling manager contacted the scalehouse staff and instructed them to identify the next self-hauled load to be directed to the sampling area. The sampling manager alternated between large and small self-hauled loads and indicated in his instructions to the scalehouse whether the next selected load was to be large or small.
- 8) At the end of each sampling day, the sampling crew manager collected the sample placards with recorded transaction numbers and net weights from the scalehouse staff.

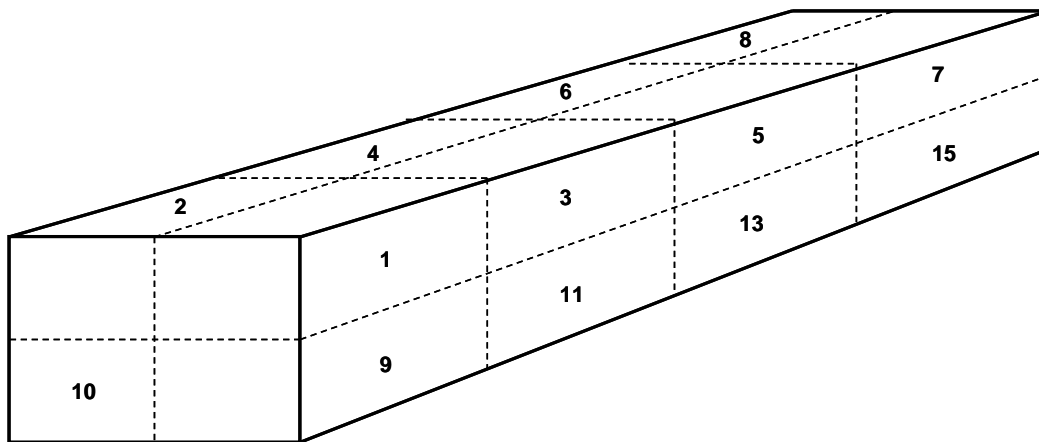
Characterization of Waste Samples and Loads

This section explains the process for characterizing the waste sample and loads once they had been selected and extracted for sampling.

Sampling and Characterization of Residential and Commercial Waste

When a load from a scheduled commercial or residential collection route or an unscheduled commercially hauled roll-off or compactor arrived at the sampling area, the sampling crew manager confirmed information about the load, as discussed in the previous section, and the driver was directed to tip the load in an elongated pile on the facility floor (or on the surface of the landfill at Redwood Landfill). At this point, the pile was divided into an imaginary 16-cell grid, as shown in the diagram below, and a sample of waste consisting of 200 or more pounds of material was extracted from a randomly selected cell using a loader or other machinery operated by facility staff. This material was placed on a tarp. After the extracted material was deposited on the tarp, the sampling crew manager estimated the weight of each sample. If judged to be less than 200 pounds, additional material was pulled from the same cell area until the desired weight was achieved. Samples judged to be excessively heavy were pared down by removing a homogenous slice of material from the tarp. After the sample had been obtained, the remainder of the load was removed from the tipping floor.

Figure 11. Visual Overlay Showing “Cells” of Material



Sorting of Waste Samples

Once a sample was selected, extracted from the load, and placed on a tarp, it was sorted by hand into the prescribed material categories. Please refer to Appendix A for the complete list and definitions of the material categories. Materials were placed in plastic laundry baskets to be weighed and recorded. Members of the sorting crew typically specialize in groups of materials, but each was trained in the full list of components. Each crew person directed materials to the appropriate specialist.

The sampling crew manager monitored the homogeneity of the material baskets as they accumulate, rejecting items that were improperly classified. Open laundry baskets allowed the manager to see the material at all times. The manager also verified the purity of each material as it was weighed, before recording the weight on the *Hand-Sort Waste Tally Form*. (Please refer to Appendix D for a copy of the *Hand-Sort Waste Tally Form*.)

The waste samples were sorted by hand until no more than a small amount of homogeneous fine material *mixed residue* remained. The overall goal was to sort each sample directly into the material categories in order to reduce the amount of indistinguishable fines or miscellaneous categories.

Field Procedures for Self-hauled Substreams

Self-hauled loads were characterized visually using a method that was developed by the California Integrated Waste Management Board and a condensed version of the material list. For these samples, the entire load of each sampled vehicle was characterized. Once the selected load was placed on the tipping floor, the visual estimator performed the following steps. Please refer to Appendix A for the condensed version of the material list appropriate for visual characterization and Appendix D for a copy of the *Visual Characterization Waste Tally Form*.

The steps for characterizing a load of self-hauled waste was as follows:

Step 1: Measure load volume. After the driver dumped the load onto the ground, the visual estimator measured the length, width, and height of the load and recorded the information on the visual sample form.

Step 2: Note which material classes and materials are present. The visual estimator walked entirely around the load and indicated on the visual sample form which materials and material classes were present in the load. The nine material classes are *Paper, Glass, Metal, Plastic, Organic, Construction and Demolition, Hazardous and E-Waste, Special Waste, and Mixed Residue*. An example of a material in the *Paper* material class is newspaper.

Step 3: Estimate composition by volume for each material class. Beginning with the largest material class present by volume, the visual estimator then estimated the volumetric percentage of this material class and recorded it on the form. This process was repeated for the next most common material class, and so forth, until the volume percentage of every material class had been estimated. The estimator then calculated the total for this step, ensuring that it totaled 100 percent.

Step 4: Estimate composition by volume for each material within each material class. The visual estimator considered each material class separately and estimates the percentage of that material class that was made up of each material. For example, the *Metal* material class includes the following materials:

- Tin Food Cans
- Major Appliances
- Other Ferrous
- Aluminum Cans - CRV
- Aluminum Cans - NonCRV
- Other Nonferrous
- Remainder/Composite Metal

The sum of the percentages for all of the materials in each material class must equal 100 percent. This process was repeated for the other material classes.

Step 5: Check and reconcile percentage data. The visual estimator then made sure the percentage estimates for the material classes added to 100 percent. Also, the percentage estimates for the materials within each class must total 100 percent.

Appendix C. Waste Sort Analytical Procedures

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

1. Convert volumetric estimates of materials to weight for the self-haul samples.
2. Calculate the estimated composition of all samples in a given vehicle type, based on the sample weight.
3. Combine the results for individual strata, using a weighted average procedure, to produce findings for each vehicle type. Apply tonnage figures for disposed waste to the composition estimates, to derive tonnage estimates for each material disposed.

Converting Volumes to Weights

The composition calculations rely on the availability of individual material weights for each sample. As described in Appendix B: Sampling Methodology, the data that were collected to characterize each self-haul sample in this study included volume estimates. Cascadia converted volume estimates to weights using accepted waste density conversion factors. These factors are listed in Table 11 at the end of this appendix, and data sources accompany the table.

Using the volume-to-weight conversion factors and the volume estimates obtained during the characterization of each sample, individual material weights were calculated using the following formula:

$$c = m \times s \times v \times d$$

where:

c = the total weight of the specific material in the sample

m = percentage estimate of the material, as a portion of broad material class (e.g., the extent to which *newspaper* constitutes all of the *paper* in the sample)

s = percentage estimate of the material class, as a portion of all of the material in the sample (e.g., the extent to which *paper* constitutes all of the material in the sample)

v = total volume of the sample (in cubic yards)

d = density conversion of the material (in pounds/cubic yard)

Composition Calculations

The composition estimates represent the **ratio of the material's weight to the total sampled waste** for each noted vehicle type. They are derived by summing each material's weight across all of the selected samples and dividing by the sum of the total weight of sampled waste, as shown in the following equation:

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

where:

c = weight of particular material
 w = sum of all sampled material weights
 for i = 1 to n
 where n = number of selected samples
 for j = 1 to m
 where m = number of materials

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

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

where:

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

Second, **precision levels** at the 90% confidence interval are calculated for a material's mean as follows:

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

where:

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

For more detail, please refer to Chapter 6 "Ratio, Regression and Difference Estimation" of *Elementary Survey Sampling* by R.L. Scheaffer, W. Mendenhall and L. Ott (PWS Publishers, 1986).

Weighted Averages

The overall waste characterization estimates were calculated by performing a weighted average across the three sectors and by each facility. The estimates for each sector were calculated using a weighted procedure which was based on the tonnage estimates provided by the Sonoma County Waste Management Agency for each of their facilities and waste sectors, shown in Table 8.

Table 8. Original Tonnages

	Residential	Commercial	Self-hauled	Total
Annapolis	444.21	169.64	1,661.03	2,274.88
Central	16,432.31	40,881.89	59,605.81	116,920.00
Guerneville	3,655.64	8,123.35	9,857.05	21,636.03
Healdsburg	20,296.14	30,798.76	22,611.16	73,706.07
Sonoma	26,097.98	36,348.01	19,169.94	81,615.93
Redwood	45,585.07	32,566.76		78,151.83
Total	112,511.35	148,888.40	112,904.99	374,304.74

Because samples were only obtained at four of the six facilities that receive Sonoma County's waste, the tonnage associated with the additional two facilities was proportionally distributed to each of the facilities that waste samples were obtained at. The weighting factors for each substream are below.

Table 9. Weighting Percentages: Residential, Commercial, Self-hauled

	Residential		Commercial		Self-hauled	
Central	17,053.7	15.2%	43,293.3	29.1%	66,377.3	58.8%
Healdsburg	21,063.7	18.7%	32,615.4	21.9%	25,179.9	22.3%
Redwood	47,309.0	42.0%	34,487.7	23.2%	-	0.0%
Sonoma	27,084.9	24.1%	38,492.0	25.9%	21,347.7	18.9%
	112,511.3	100.0%	148,888.4	100.0%	112,905.0	100.0%

The weighting percentages that were used to perform the overall characterization calculations are listed in Table 10. below. Tonnage estimates were provided by the Sonoma County Waste Management Agency for each of their facilities and waste sectors.

Table 10. Weighting Percentages: Overall

	Residential	Commercial	Self-hauled	Total
Central	4.56%	11.57%	17.73%	33.86%
Healdsburg	5.63%	8.71%	6.73%	21.07%
Redwood	12.64%	9.21%	0.00%	21.85%
Sonoma	7.24%	10.28%	5.70%	23.22%
	30.06%	39.78%	30.16%	100.00%

The **weighted average for an overall composition estimate** is performed as follows:

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

where:

- p = the proportion of tonnage contributed by the noted sample group
- r = ratio of material weight to total waste weight in the noted sample group
- for j = 1 to m
- where m = number of materials

The **variance of the weighted average** is calculated:

$$VarO_j = (p_1^2 * \hat{V}_{r_{j1}}) + (p_2^2 * \hat{V}_{r_{j2}}) + (p_3^2 * \hat{V}_{r_{j3}}) + \dots$$

The composition estimates for the overall waste stream were applied to the sum of the sector tonnages to estimate the amount of waste disposed for each material type.

Table 11. Volume-to-Weight Conversion Factors

Subclass ID	Subclass	Conversion Factor	Conversion Source
1	Uncoated Corrugated Cardboard	53.00	CIWMB2004
2	Paper Bags	108.00	San Diego County- Kraft Paper
3	Other Recyclable Paper	295.00	U.S. EPA (Average of newspaper, office paper, and magazines)
4	Cellulose Insulation	17.00	U.S. EPA
5	R/C Paper	363.50	U.S. EPA
6	Glass Bottles and Containers	600.00	U.S. EPA
7	Flat Glass	1,400.00	U.S. EPA
8	R/C Glass	1,400.00	U.S. EPA
9	Tin/Steel Cans	150.00	U.S. EPA
10	Major Appliances	145.00	CIWMB2004
11	Used Oil Filters	834.40	Tellus
12	HVAC Ducting	47.00	CIWMB2004
13	Other Ferrous	225.00	CIWMB2004
14	Aluminum Cans	65.00	U.S. EPA
15	Other Non-Ferrous	225.00	CIWMB2004
16	R/C Metal	142.83	Average of all "metals" without Used Oil Filters
17	Brown Goods and Other Small Consumer Electronics	343.17	CIWMB Staff
18	Computer-related Electronics	354.08	CIWMB Staff
19	TV's & Other CRTs	405.00	CIWMB Staff
20	Plastic Bottles and Tubs	29.50	Average of PETE Containers and HDPE Containers
21	Other Rigid Packaging	21.76	Tellus
22	Expanded #6/Polystyrene Packaging/Insulation	32.00	CIWMB2004
23	Trash Bags	35.00	CIWMB2004
24	Grocery/ Merch. Bags	35.00	CIWMB2004
25	Non-Bag Packaging Film	35.00	CIWMB2004
26	Plastic Sheeting and Agricultural Film	35.00	CIWMB2004 - non bag packaging film
27	Other Film	22.55	Tellus
28	Durable Plastic Items	50.00	U.S. EPA
29	Plastic Piping	281.50	Tellus/Cascadia
30	R/C Plastic	50.00	U.S. EPA
31	Food	486.00	FEECO, Tellus
32	Leaves & Grass	312.50	U.S. EPA
33	Prunings & Trimmings	127.00	CIWMB2004
34	Branches & Stumps	127.00	CIWMB2004
35	R/C Organic	263.13	Average of all "Compostables"
36	Concrete	860.00	CIWMB2004
37	Asphalt Paving	772.80	Tellus scaled down by factor from Florida C&D study
38	Composition Roofing	731.00	CIWMB2004
39	Other Asphalt Roofing	731.00	CIWMB2004
40	Other Aggregates	860.00	CIWMB2004
41	Clean Dimensional Lumber	169.00	CIWMB2004
42	Clean Engineered Wood	268.00	CIWMB2004
43	Pallets and Crates	169.00	CIWMB2004
44	Other Recyclable Wood	169.00	CIWMB2004
45	Painted/Stained Wood	169.00	CIWMB2004
46	Creosote-treated Wood	169.00	CIWMB2004
47	Other Treated Wood	169.00	CIWMB2004
48	Clean Gypsum Board	467.00	CIWMB2004
49	Painted/Demolition Gypsum	467.00	CIWMB2004
50	Rock and Gravel	999.00	CIWMB2004
51	Dirt and Sand	929.00	CIWMB2004
52	Fiberglass insulation	17.00	Tellus
53	R/C C&D	416.53	CIWMB2004
54	Paint	1,836.00	Tellus
55	Vehicle & Equip. Fluids	1,653.00	Tellus
56	Used Oil	1,524.94	Tellus
57	Batteries	2,400.00	CIWMB Staff
58	R/C HHW	1,671.31	Average of HHW liquids
59	Textiles	225.00	Tellus
60	Carpet	147.00	CIWMB2004
61	Carpet Padding	62.00	CIWMB2004
62	Ash	1,012.50	FEECO
63	Bulky Items	80.00	Tellus
64	Tires	200.00	CIWMB Staff
65	R/C Other	142.80	Average of all "other materials," except ash
66	Mixed Residue	999.00	FEECO
67	MSW	225.00	U.S. EPA

Data Source Abbreviations

Following are the descriptions of the sources from which data were gathered for the conversion factors listed in Table C-2. The materials showing no conversion factors were not encountered during the study.

Cascadia Staff refers to direct measurements of representative samples taken by Cascadia staff members for this and other studies.

CIWMB refers to *Conducting a Diversion Study - A Guide for California Jurisdictions*, California Integrated Waste Management Board, 2001.

CIWMB 2004 refers to *Task 3: Detailed Characterization of Construction and Demolition (C&D) Waste Study*, California Integrated Waste Management Board, 2004.

FEECO refers to FEECO International, *Complete Systems and Equipment Handbook*, 9th printing.

San Diego County refers to *San Diego: Waste Composition Study*, City of San Diego Environmental Services Department, 1999-2000.

Tellus refers to the Tellus Institute, Boston, Massachusetts.

US EPA refers to the *Business Waste Prevention Quantification Methodologies - Business Users Guide*: Washington, D.C. and Los Angeles: U.S. Environmental Protection Agency, Municipal and Industrial Solid Waste, and University of California at Los Angeles Extension, Recycling and Municipal Solid Waste Management Program: Grant Number CX 824548-01-0, 1996.

Appendix D. Field Forms

This appendix includes the field forms used for this study, including:

1. Scheduled Load Selection Sheet
2. Unscheduled Load Selection Sheet
3. Sample Placard
4. Visual Characterization Waste Tally Sheet
5. Hand Sort Waste Tally Sheet

Scheduled Load Selection Sheet

Sonoma County Waste Characterization Study Selection Sheet for Scheduled Loads

HEALDSBURG
Tues, March 20, 2007

Instructions to scalehouse staff:

1. When trucks come in, match them with the collection routes & vehicles listed below.
2. The blue instructions tell you how many vehicles we need from each list. Get the required number, in any order.
Keep track with check-marks.
3. For each vehicle you get, put one of the pink "SAMPLE" cards on the windshield, the wiper blade.
4. Send the selected vehicle to the sampling area. Be sure to TELL THE DRIVER where to go.
5. Alert the sampling crew that a truck is on the way.

Quotas

9	Residential Packer Trucks (ASL)	(Get every Res Packer)
3	Commercial Packer Trucks (FEL)	(Get every Com Packer)
2	Commercial Compacting or Loose DB	(Get the first 3 that show up from the list below)

Route #	Truck #	Origin	Estimate Time of Arrival	Residential or Commercial	Type of Truck	Hauling Company	Check off
-	265	Windsor		Com	Front Loader	North Bay	
-	265	Windsor		Com	Front Loader	North Bay	
C03	202753	Healdsburg/Geyserville		Com	FEL	Empire	
		Argonaut Construction		Com	40 yd box	North Bay	
		Medtronic		Com	30 yd compactor	North Bay	
		Standard Structures		Com	30 yd trash	North Bay	
		Valley Oak Park		Com	30 yd compactor	North Bay	
T04	100054	Healdsburg		Res	ASL	Empire	
T08	100053	Geyserville		Res	ASL	Empire	
T10	101625	Healdsburg		Res	ASL	Empire	
T06	100086	Sebastopol		Res	ASL	Empire	
1	970	Windsor		Res	Side Loader	North Bay	
2	921	Windsor		Res	SL	North Bay	
3	966	Windsor		Res	SL	North Bay	
4	932	Windsor		Res	SL	North Bay	
5	Unknown	Windsor		Res	SL	North Bay	

Get all 3 of these

Get 2 of these

Get all 9 of these

Unscheduled Load Selection Sheet

Sonoma County Waste Characterization Study
Selection Sheet for UNSCHEDULED Loads

SONOMA

Tues, March 27, 2007

Instructions to scalehouse staff:

1. Sky Valley will tell you what kind of UNSCHEDULED vehicle they need next, from the list below.
2. When Sky Valley requests the next UNSCHEDULED load, send the the next one of the correct type. Go through the list below, in order.
3. When the next UNSCHEDULED vehicle of the correct type comes along, make sure it contains waste that was generated in Sonoma County. If it came from outside the county, skip that vehicle and wait for the next correct vehicle.
4. When you find the correct vehicle, fill in the jurisdiction and liscense plate # on the pink SAMPLE placard and place
5. Instruct the driver to tip the load at the designated sampling area. Alert the sampling crew that the vehicle is coming.
6. When the vehicle comes back from the tipping area, it must weigh out!!! Collect the pink SAMPLE card and **write the transaction number and net weight** on the card.

ALL vehicles selected for this part of the study must weigh in and weigh out, even if you don't normally weigh them

Quotas

6	Self-Haul Small
14	Self-Haul Large
1	Unscheduled Debris Box

Vehicle Selection Order

Self Haul Large
Self Haul Large
Self Haul Small
Self Haul Large
Self Haul Large
Self Haul Small
Self Haul Large
Unscheduled Debris Box (hand sort)
Self Haul Large
Self Haul Small
Self Haul Large
Self Haul Large
Self Haul Small
Self Haul Large
Self Haul Large
Self Haul Small
Self Haul Large
Self Haul Large
Self Haul Small
Self Haul Large
Self Haul Large

Sample Placard

Sample ID: _____

Date: _____

SAMPLE

For Self Haul Loads

Jurisdiction: _____

Liscense plate #: _____

Transaction #: _____

Net Weight: _____

Visual Characterization Waste Tally Form

Sonoma County Waste Composition Study

Date: _____ Route/Truck #: _____ Dimensions: _____ x _____ x _____ (inches)

Paper _____ %

Uncoated Corrugated Cardboard	
Paper Bags/Kraft	
Newspaper	
White Ledger	
Colored Ledger	
Computer Paper	
Other Office Paper	
Magazines & Catalogs	
Phone Books & Directories	
Other Recyclable Paper	
Other Compostable Paper	
R/C Paper	

Glass _____ %

Clear Glass	
Green Glass	
Brown Glass	
Other Colored Glass	
Flat Glass	
R/C Glass	

Organics _____ %

Food	
Leaves & Grass	
Prunings & Trimmings	
Branches & Stumps	
Agricultural Crop Residues	
Manures	
Textiles	
Carpet	
Carpet Padding	
R/C Organics	

Haz & Ewaste _____ %

Paint	
Vehicle & Equipment Fluids	
Used Oil & Oil Filters	
Large Rechargeable Batteries	
Small Rechargeable Batteries	
Household Batteries	
Universal Waste	
Covered Electronic Waste	
Fluorescent Tubes	
Other HHW	
R/C Hazardous & E-waste	

Metal _____ %

Tin/Steel Cans	
Major Appliances	
Other Ferrous	
Aluminum Cans	
Other Non-Ferrous	
R/C Metal	

Special Waste _____ %

Ash	
Sewage Solids	
Industrial Sludge	
Treated Medical Waste	
Bulky Items	
Tires	
R/C Special Waste	

Plastic _____ %

PET Bottles	
Other PET Contnrs	
HDPE Nat. Bottles	
HDPE Colored Bottles	
Other HDPE Contnrs	
#3-#7 Bottles	
#3-#7 Other Contnrs	
Recyclable Plastic Film	
Non-recyclable Film	
Durable Plastic Items	
R/C Plastic	

C&D _____ %

Concrete	
Asphalt Paving	
Asphalt Roofing	
Clean recyclable wood	
Other Recyclable Wood	
Treated Wood Waste	
Clean Gypsum Board	
Rock, Soil, & Fines	
R/C C&D	

Mixed Residue _____ %

Mix Residue	
-------------	--

Samp ID: _____
 Jurisdiction: _____
 Circle One:
 SH Large
 SH Small

Generator Clues:

Hand Sort Waste Tally Form

Sonoma County Waste Composition Study

Date: _____

Page 1

Samp ID: _____

Paper	1	Cardboard				Metal	41	Tin/Steel Cans				
	2	Paper Bags/Kraft					42	Major Appliances				
	3	Newspaper					43	Other Ferrous				
	4	White Ledger					44	Aluminum Cans-CRV				
	5	Colored Ledger					45	Aluminum Cans-nonCRV				
	6	Computer Paper					46	Other Non-Ferrous				
	7	Other Office Paper					47	R/C Metal				
	Glass	8	Magazines & Catalogs				Plastic	23	PET Bottles-CRV			
		9	PhoneBooks/Directory					24	PET Bottles-nonCRV			
		10	Other Recyclable Paper					25	Other PET Contnrs-CRV			
		11	Othr Compost Paper					26	Other PET Cont-nonCRV			
		12	R/C Paper					27	HDPE Nat. Bottles-CRV			
13		Clear Glass-CRV				28		HDPE Nat. Botls-nonCRV				
14		Clear Glass-nonCRV				29		HDPE Col. Bottles-CRV				
15		Green Glass-CRV				30		HDPE Col. Botls-nonCRV				
16		Green Glass-nonCRV				31		HDPE Contnrs-CRV				
17		Brown Glass-CRV				32		HDPE Contnrs-nonCRV				
Organics	18	Brown Glass-nonCRV				33		#3-#7 Bottles-CRV				
	19	Other Colored-CRV				34		#3-#7 Bottles-nonCRV				
	20	Other Colored-nonCRV				35		#3-#7 Contnrs-CRV				
	21	Flat Glass				36		#3-#7 Contnrs-nonCRV				
	22	R/C Glass				37		Recyclable Plastic Film				
	48	Food				38		Non-recyclable Film				
		Percent Vegetative vs Non-Vegitative	V=		NV=	39	Durable Plastic Items					
	49	Leaves & Grass				40	R/C Plastic					
	50	Prunings & Trimmings				C&D	58	Concrete				
	51	Branches & Stumps					59	Asphalt Paving				
52	Agricultural Crop Residues				60		Asphalt Roofing					
53	Manures				61		Clean recyclable wood					
54	Textiles				62		Other Recyclable Wood					
55	Carpet				63		Treated Wood Waste					
56	Carpet Padding				64		Clean Gypsum Board					
57	R/C Organics				65	Rock, Soil, & Fines						
					66	R/C C&D						

Route: _____ Hauling Company: _____

Truck type: _____ Jurisdiction: _____

(Packer, compactor, roll-off, other)

Circle One: Residential

Commercial

Sonoma County Waste Composition Study
Page 2

Hazardous & E-waste	67	Paint				Special Waste	78	Ash			
	68	Fluids					79	Sewage Solids			
	69	Used Oil & Oil Filters					80	Industrial Sludge			
	70	Lg Recharge Batteries					81	Treated Medical Waste			
	71	Sm Recharge Batteries					82	Bulky Items			
	72	Household Batteries					83	Tires			
	73	Universal Waste					84	R/C Special Waste			
	74	Covered Electronic Waste					85	Mixed Residue			
	75	Fluorescent Tubes									
	76	Other HHW									
77	R/C Hazardous & E-waste										

Generator Clue: please include any clues found in loads that are highly recyclable as to the origin of the waste, envelopes, mailing labels, etc. Either write the address below or staple it to the form.

Appendix E. Waste Characterization Comparison 1995/96 to 2006/07

Table 12. 1995/96 to 2006/07 Major Waste Class Comparisons, by Sector

	Overall		Residential		Commercial		Self-hauled	
	95/96	06/07	95/96	06/07	95/96	06/07	95/96	06/07
Paper	26.92%	15.82%	32.26%	18.95%	28.11%	20.61%	15.83%	7.47%
Glass	3.60%	2.57%	3.77%	2.09%	3.65%	2.59%	3.23%	2.96%
Metal	7.70%	3.88%	6.66%	3.51%	6.23%	4.59%	11.66%	3.39%
Organics	31.53%	35.70%	39.07%	51.39%	28.75%	42.46%	22.38%	13.93%
Plastic	7.77%	7.14%	8.03%	8.56%	8.16%	10.23%	6.75%	2.27%
C&D	19.80%	28.84%	9.21%	7.42%	22.84%	15.04%	33.92%	63.89%
Haz. & E-Waste	0.44%	1.24%	0.29%	1.52%	0.41%	1.59%	0.72%	0.58%
Special Waste	2.25%	1.78%	0.72%	0.37%	1.85%	1.72%	5.51%	3.11%
Mixed Residue	0.00%	3.03%	0.00%	6.18%	0.00%	1.17%	0.00%	2.40%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 12. 1995/96 to 2006/07 Major Waste Class Comparisons, by Sector

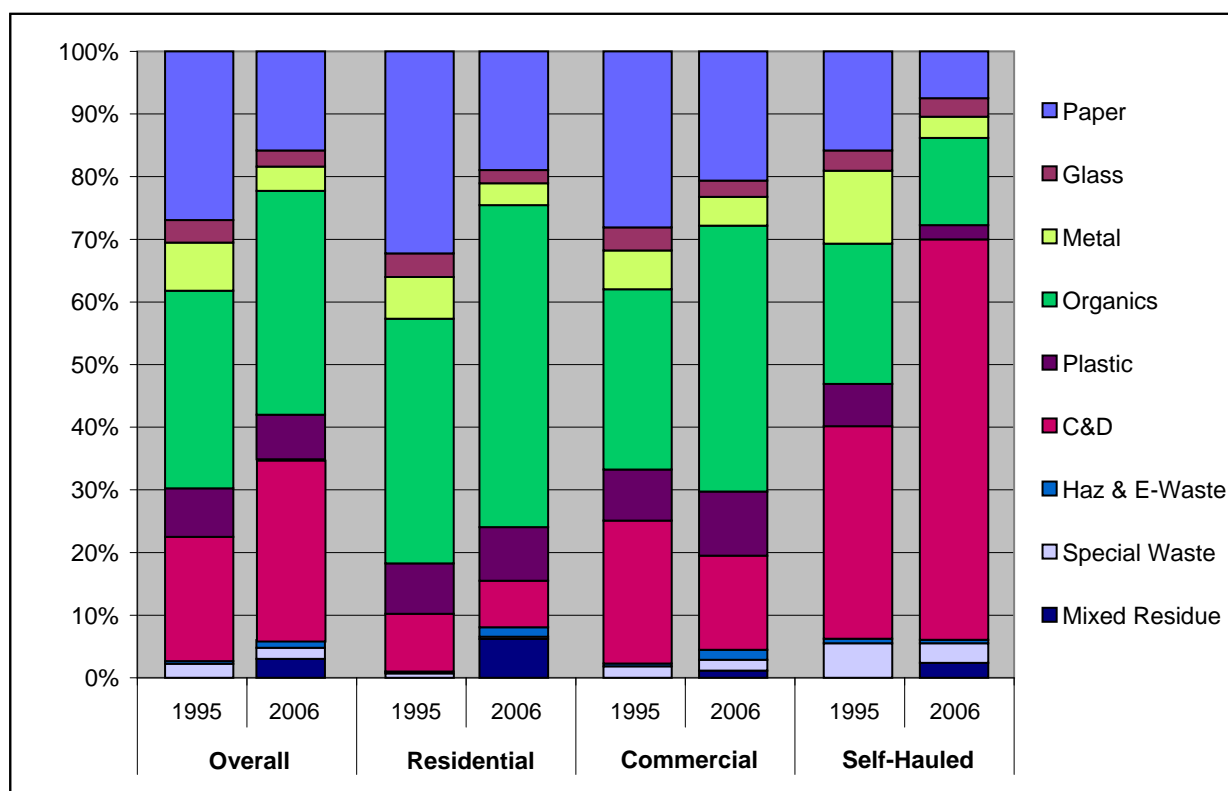


Table 13. 1995/96 to 2006/07 Waste Characterization Comparisons, by Sector (Percents)

Material Name	Overall		Residential		Commercial		Self-hauled	
	95/96	06/07	95/96	06/07	95/96	06/07	95/96	06/07
PAPER	26.92%	15.82%	32.26%	18.95%	28.11%	20.61%	15.83%	7.47%
Uncoated Corrugated Cardboard	4.76%	1.95%	3.50%	1.56%	6.48%	2.96%	4.45%	1.11%
Paper Bags/Kraft	0.60%	0.34%	0.19%	0.63%	1.39%	0.29%	0.16%	0.15%
Newspaper	1.17%	1.64%	1.91%	2.11%	0.72%	2.20%	0.54%	0.58%
White Ledger	2.81%	0.55%	3.89%	0.66%	2.25%	0.92%	1.75%	0.02%
Colored Ledger	0.84%	0.06%	0.72%	0.03%	1.23%	0.11%	0.49%	0.02%
Computer Paper	0.16%	0.07%	0.12%	0.00%	0.25%	0.20%	0.10%	0.00%
Other Office Paper	0.05%	0.54%	0.01%	0.64%	0.12%	0.89%	0.01%	0.05%
Magazines & Catalogs	0.10%	0.91%	0.14%	1.41%	0.06%	0.93%	0.08%	0.45%
Phone Books & Directories	1.86%	0.02%	2.94%	0.02%	1.15%	0.01%	1.01%	0.02%
Other Recyclable Paper	7.67%	3.65%	9.99%	4.56%	7.02%	4.12%	4.56%	2.29%
Other Compostable Paper	6.35%	4.23%	7.96%	6.38%	7.02%	5.78%	2.58%	0.50%
R/C Paper	0.54%	1.86%	0.88%	0.94%	0.44%	2.21%	0.10%	2.27%
GLASS	3.60%	2.57%	3.77%	2.09%	3.65%	2.59%	3.23%	2.96%
Clear Bottles & Containers	1.44%	0.73%	1.85%	0.87%	1.20%	1.01%	1.06%	0.27%
Green Bottles & Containers	0.60%	0.45%	0.69%	0.73%	0.45%	0.43%	0.69%	0.22%
Brown Bottles & Containers	0.58%	0.26%	0.76%	0.30%	0.40%	0.25%	0.54%	0.24%
Flat Glass	0.34%	0.16%	0.08%	0.00%	0.61%	0.17%	0.39%	0.28%
R/C Glass	0.64%	0.98%	0.39%	0.20%	0.99%	0.73%	0.56%	1.95%
METAL	7.70%	3.88%	6.66%	3.51%	6.23%	4.59%	11.66%	3.39%
Tin/Steel Cans	1.22%	0.52%	1.72%	0.58%	0.92%	0.60%	0.79%	0.37%
Other Ferrous	3.25%	0.04%	1.82%	0.00%	2.56%	0.00%	6.74%	0.11%
Aluminum Cans	0.37%	1.91%	0.44%	1.48%	0.29%	2.34%	0.37%	1.80%
Other Non-Ferrous	0.52%	0.14%	0.29%	0.21%	0.65%	0.18%	0.71%	0.04%
Major Appliances	0.25%	0.35%	0.46%	0.27%	0.08%	0.22%	0.14%	0.58%
R/C Metal	2.09%	0.92%	1.93%	0.98%	1.73%	1.25%	2.90%	0.50%
ORGANICS	31.53%	35.70%	39.07%	51.39%	28.75%	42.46%	22.38%	13.93%
Food	13.29%	21.16%	18.16%	35.56%	13.74%	27.84%	4.12%	0.63%
Leaves & Grass	4.28%	3.98%	3.91%	3.34%	5.06%	4.49%	3.78%	3.93%
Prunings & Trimmings	2.39%	1.68%	2.56%	0.40%	2.52%	1.55%	1.90%	2.96%
Branches & Stumps	0.42%	0.29%	0.39%	0.17%	0.54%	0.18%	0.29%	0.53%
Agricultural Crop Residues	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Manures	0.00%	0.16%	0.00%	0.16%	0.00%	0.08%	0.00%	0.25%
Textiles	2.42%	2.44%	3.33%	3.63%	1.26%	2.11%	2.54%	1.75%
Carpet & Carpet Padding	2.84%	1.79%	2.46%	1.02%	1.90%	1.26%	4.88%	3.07%
R/C Organics	5.89%	4.21%	8.25%	7.10%	3.74%	4.93%	4.87%	0.81%
PLASTIC	7.77%	7.14%	8.03%	8.56%	8.16%	10.23%	6.75%	2.27%
Other PETE Containers	0.30%	0.08%	0.42%	0.14%	0.23%	0.09%	0.16%	0.01%
PETE Bottles	0.02%	0.37%	0.03%	0.63%	0.02%	0.46%	0.02%	0.05%
HDPE Natural Bottles	0.29%	0.14%	0.31%	0.19%	0.34%	0.20%	0.18%	0.01%
HDPE Colored Bottles	0.42%	0.17%	0.50%	0.25%	0.37%	0.23%	0.33%	0.02%
Other HDPE Containers	0.10%	0.17%	0.09%	0.13%	0.03%	0.17%	0.23%	0.19%
Plastic Film	3.35%	3.10%	3.54%	4.48%	3.95%	4.50%	2.14%	0.26%
#3-#7 Plastics	1.97%	0.37%	2.09%	0.47%	2.15%	0.32%	1.48%	0.33%
R/C Plastic	1.33%	2.74%	1.06%	2.27%	1.06%	4.25%	2.21%	1.40%
CONSTRUCTION & DEMOLITION	19.80%	28.84%	9.21%	7.42%	22.84%	15.04%	33.92%	63.89%
Rock, Soil, & Fines	2.90%	3.20%	2.92%	2.04%	2.88%	3.88%	2.91%	3.44%
Concrete	2.22%	1.67%	0.70%	0.49%	3.08%	0.90%	3.64%	3.63%
Asphalt Paving & Roofing	2.03%	2.72%	0.79%	0.20%	1.20%	1.93%	5.43%	5.86%
Clean Gypsum Board	1.15%	1.83%	0.55%	0.56%	0.72%	0.19%	2.84%	4.87%
Wood	9.95%	13.06%	2.99%	2.31%	13.95%	5.51%	16.31%	31.39%
R/C C&D	1.54%	6.35%	1.26%	1.83%	1.02%	2.64%	2.79%	14.69%
HAZARDOUS & E-WASTE	0.44%	1.24%	0.29%	1.52%	0.41%	1.59%	0.72%	0.58%
Paint	0.07%	0.26%	0.04%	0.12%	0.04%	0.48%	0.15%	0.12%
Vehicle/Equipment Fluids & Oil	0.08%	0.02%	0.10%	0.02%	0.05%	0.02%	0.07%	0.03%
Small & Household Batteries	0.05%	0.05%	0.07%	0.07%	0.04%	0.01%	0.04%	0.08%
Large Rechargeable Batteries	0.08%	0.00%	0.00%	0.00%	0.08%	0.01%	0.22%	0.00%
Hazardous & E-waste	0.16%	0.90%	0.07%	1.32%	0.20%	1.07%	0.24%	0.34%
SPECIAL WASTE	2.25%	1.78%	0.72%	0.37%	1.85%	1.72%	5.51%	3.11%
Ash	0.19%	0.03%	0.36%	0.10%	0.00%	0.01%	0.17%	0.00%
Industrial Sludge	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Treated Medical Waste	0.10%	0.01%	0.00%	0.02%	0.29%	0.01%	0.00%	0.01%
Bulky Items	1.62%	1.14%	0.33%	0.13%	1.49%	0.44%	4.07%	2.86%
Tires	0.15%	0.29%	0.02%	0.11%	0.06%	0.46%	0.52%	0.24%
R/C Special Waste	0.19%	0.31%	0.00%	0.02%	0.02%	0.80%	0.76%	0.00%
MIXED RESIDUE	0.00%	3.03%	0.00%	6.18%	0.00%	1.17%	0.00%	2.40%
Mixed Residue	n/a	3.03%	n/a	6.18%	n/a	1.17%	n/a	2.40%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 14. 1995/96 to 2006/07 Waste Characterization Comparisons, by Sector (Tons)

Material Name	Overall		Residential		Commercial		Self-hauled	
	95/96	06/07	95/96	06/07	95/96	06/07	95/96	06/07
PAPER	111,046.6	59,229.5	55,393.0	21,319.6	40,132.6	30,692.2	15,521.6	8,434.6
Uncoated Corrugated Cardboard	19,636.2	7,283.5	6,015.9	1,760.1	9,252.6	4,400.8	4,367.8	1,248.5
Paper Bags/Kraft	2,465.1	1,280.9	330.2	710.4	1,979.4	424.7	155.5	172.3
Newspaper	4,825.8	6,137.5	3,274.2	2,369.6	1,021.4	3,269.5	530.3	652.7
White Ledger	11,607.4	2,071.9	6,678.1	745.4	3,210.6	1,376.8	1,718.8	27.2
Colored Ledger	3,472.3	221.6	1,241.2	36.4	1,753.5	163.3	477.7	27.2
Computer Paper	669.4	280.1	211.0	-	356.0	291.4	102.5	0.1
Other Office Paper	195.6	2,031.9	17.6	718.8	169.5	1,326.7	8.5	58.4
Magazines & Catalogs	402.9	3,414.4	248.4	1,586.1	80.8	1,385.9	73.6	508.1
Phone Books & Directories	7,672.2	71.5	5,051.3	27.3	1,635.2	22.1	985.7	22.0
Other Recyclable Paper	31,657.3	13,651.0	17,160.6	5,127.7	10,021.6	6,130.5	4,475.3	2,588.2
Other Compostable Paper	26,210.1	15,814.5	13,661.9	7,179.2	10,020.9	8,609.7	2,527.4	564.5
R/C Paper	2,232.3	6,970.9	1,502.6	1,058.6	631.0	3,290.8	98.6	2,565.6
GLASS	14,843.5	9,614.4	6,471.2	2,356.8	5,205.2	3,858.8	3,167.2	3,343.2
Clear Bottles & Containers	5,924.7	2,724.7	3,170.8	980.8	1,718.9	1,504.4	1,035.1	306.1
Green Bottles & Containers	2,488.8	1,679.5	1,176.7	820.9	640.1	643.9	672.0	247.3
Brown Bottles & Containers	2,405.8	970.1	1,306.8	333.3	566.5	373.4	532.6	266.6
Flat Glass	1,395.0	587.5	143.3	-	871.2	252.6	380.5	317.3
R/C Glass	2,629.1	3,652.5	673.6	221.8	1,408.5	1,084.5	547.0	2,205.8
METAL	31,746.9	14,539.3	11,428.0	3,949.2	8,888.1	6,838.3	11,431.0	3,826.8
Tin/Steel Cans	5,034.0	1,938.5	2,944.8	650.4	1,309.7	891.3	779.5	418.2
Other Ferrous	13,395.6	132.1	3,126.0	-	3,661.9	-	6,607.7	121.6
Aluminum Cans	1,524.2	7,161.3	753.4	1,662.9	409.3	3,490.6	361.5	2,027.4
Other Non-Ferrous	2,125.0	527.4	491.5	231.9	933.7	268.2	699.7	42.2
Major Appliances	1,039.4	1,319.4	795.0	299.6	108.1	334.1	136.3	652.8
R/C Metal	8,628.8	3,460.6	3,317.2	1,104.4	2,465.4	1,854.0	2,846.3	564.6
ORGANICS	130,074.1	133,638.5	67,077.2	57,824.0	41,049.8	63,215.8	21,947.9	15,732.5
Food	54,836.2	79,207.2	31,182.4	40,007.1	19,615.9	41,449.4	4,038.2	708.7
Leaves & Grass	17,643.0	14,879.9	6,718.1	3,756.8	7,216.8	6,691.9	3,708.2	4,440.7
Prunings & Trimmings	9,856.8	6,296.1	4,401.9	453.5	3,592.8	2,312.3	1,862.2	3,347.3
Branches & Stumps	1,739.5	1,093.3	678.0	192.7	773.1	273.2	288.3	593.6
Agricultural Crop Residues	-	-	-	-	-	-	-	-
Manures	-	595.2	-	181.4	-	120.3	-	280.2
Textiles	9,990.4	9,117.2	5,711.1	4,089.3	1,793.2	3,147.9	2,486.1	1,975.3
Carpet & Carpet Padding	11,727.6	6,688.0	4,223.5	1,150.9	2,714.7	1,881.4	4,789.4	3,469.7
R/C Organics	24,280.6	15,761.6	14,162.1	7,992.4	5,343.1	7,339.4	4,775.5	916.9
PLASTIC	32,051.3	26,707.3	13,783.7	9,632.2	11,645.7	15,226.3	6,622.1	2,559.9
Other PETE Containers	1,219.0	299.4	728.9	160.1	334.9	137.1	155.2	12.1
PETE Bottles	93.3	1,393.9	45.0	703.2	27.5	680.5	20.8	56.5
HDPE Natural Bottles	1,183.9	514.1	525.1	213.8	482.5	303.4	176.3	14.9
HDPE Colored Bottles	1,713.4	627.2	856.9	283.6	533.2	347.0	323.3	18.5
Other HDPE Containers	411.6	626.9	146.5	147.1	42.1	257.5	223.0	218.6
Plastic Film	13,822.2	11,610.2	6,083.2	5,037.8	5,636.2	6,693.7	2,102.9	291.4
#3-#7 Plastics	8,115.8	1,380.5	3,584.8	530.3	3,075.4	482.9	1,455.6	372.5
R/C Plastic	5,492.1	10,255.1	1,813.3	2,556.3	1,513.8	6,324.1	2,164.9	1,575.4
CONSTRUCTION & DEMOLITION	81,689.2	107,948.2	15,813.4	8,349.7	32,612.7	22,399.4	33,263.4	72,134.3
Rock, Soil, & Fines	11,977.2	11,995.9	5,020.8	2,300.2	4,104.8	5,778.0	2,851.7	3,888.3
Concrete	9,163.5	6,269.1	1,194.3	546.5	4,398.1	1,338.4	3,571.1	4,101.3
Asphalt Paving & Roofing	8,390.9	10,169.6	1,361.4	221.5	1,707.5	2,877.2	5,322.0	6,619.3
Clean Gypsum Board	4,746.1	6,845.3	936.4	628.7	1,029.1	278.2	2,780.6	5,496.3
Wood	41,043.2	48,886.4	5,128.8	2,595.6	19,916.2	8,198.3	15,998.4	35,441.5
R/C C&D	6,368.2	23,781.9	2,171.7	2,057.2	1,456.9	3,929.3	2,739.5	16,587.6
HAZARDOUS & E-WASTE	1,796.9	4,628.4	501.2	1,712.4	591.8	2,361.1	704.0	650.8
Paint	273.6	958.1	70.4	129.6	54.0	709.8	149.1	139.0
Vehicle/Equipment Fluids & Oil	318.2	90.4	174.9	22.6	75.3	29.1	68.0	37.4
Small & Household Batteries	214.5	184.4	123.0	76.2	56.6	16.3	34.9	87.6
Large Rechargeable Batteries	334.9	9.3	5.0	2.2	117.9	7.5	212.1	-
Hazardous & E-waste	655.7	3,386.1	127.8	1,481.9	288.0	1,598.4	239.9	386.7
SPECIAL WASTE	9,280.4	6,674.4	1,236.3	414.9	2,640.2	2,559.0	5,403.9	3,511.7
Ash	789.3	119.4	622.4	107.6	4.3	16.2	162.6	-
Industrial Sludge	-	-	-	-	-	-	-	-
Treated Medical Waste	410.1	47.1	2.5	24.6	407.6	7.5	-	14.9
Bulky Items	6,685.0	4,279.0	572.4	145.2	2,125.0	657.6	3,987.7	3,228.0
Tires	627.6	1,071.3	39.0	118.7	78.7	691.8	509.8	268.8
R/C Special Waste	768.4	1,157.6	-	18.8	24.7	1,185.9	743.8	-
MIXED RESIDUE	-	11,324.8	-	6,952.6	-	1,737.5	-	2,711.1
Mixed Residue	-	11,324.8	-	6,952.6	-	1,737.5	-	2,711.1
TOTAL	412,529.0	374,304.7	171,704.0	112,511.3	142,766.0	148,888.4	98,061.0	112,905.0

Table 15: 1995/96 to 2006/07 Residential Waste per Capita Comparison

POUNDS PER CAPITA			
Material Name	Residential		Percent Change
	95/96	06/07	
PAPER	315.7	105.1	-67%
Uncoated Corrugated Cardboard	34.3	8.7	-75%
Paper Bags/Kraft	1.9	3.5	86%
Newspaper	18.7	11.7	-37%
White Ledger	38.1	3.7	-90%
Colored Ledger	7.1	0.2	-97%
Computer Paper	1.2	-	-100%
Other Office Paper	0.1	3.5	3430%
Magazines & Catalogs	1.4	7.8	452%
Phone Books & Directories	28.8	0.1	-100%
Other Recyclable Paper	97.8	25.3	-74%
Other Compostable Paper	77.9	35.4	-55%
R/C Paper	8.6	5.2	-39%
GLASS	36.9	11.6	-69%
Clear Bottles & Containers	18.1	4.8	-73%
Green Bottles & Containers	6.7	4.0	-40%
Brown Bottles & Containers	7.4	1.6	-78%
Flat Glass	0.8	-	-100%
R/C Glass	3.8	1.1	-72%
METAL	65.1	19.5	-70%
Tin/Steel Cans	16.8	3.2	-81%
Other Ferrous	17.8	-	-100%
Aluminum Cans	4.3	8.2	91%
Other Non-Ferrous	2.8	1.1	-59%
Major Appliances	4.5	1.5	-67%
R/C Metal	18.9	5.4	-71%
ORGANICS	382.3	285.0	-25%
Food	177.7	197.2	11%
Leaves & Grass	38.3	18.5	-52%
Prunings & Trimmings	25.1	2.2	-91%
Branches & Stumps	3.9	0.9	-75%
Agricultural Crop Residues	-	-	N/A
Manures	-	0.9	N/A
Textiles	32.5	20.2	-38%
Carpet & Carpet Padding	24.1	5.7	-76%
R/C Organics	80.7	39.4	-51%
PLASTIC	78.5	47.5	-40%
Other PETE Containers	4.2	0.8	-81%
PETE Bottles	0.3	3.5	1252%
HDPE Natural Bottles	3.0	1.1	-65%
HDPE Colored Bottles	4.9	1.4	-71%
Other HDPE Containers	0.8	0.7	-13%
Plastic Film	34.7	24.8	-28%
#3-#7 Plastics	20.4	2.6	-87%
R/C Plastic	10.3	12.6	22%
CONSTRUCTION & DEMOLITION	90.1	41.2	-54%
Rock, Soil, & Fines	28.6	11.3	-60%
Concrete	6.8	2.7	-60%
Asphalt Paving & Roofing	7.8	1.1	-86%
Clean Gypsum Board	5.3	3.1	-42%
Wood	29.2	12.8	-56%
R/C C&D	12.4	10.1	-18%
HAZARDOUS & E-WASTE	2.9	8.4	196%
Paint	0.4	0.6	59%
Vehicle/Equipment Fluids & Oil	1.0	0.1	-89%
Small & Household Batteries	0.7	0.4	-46%
Large Rechargeable Batteries	0.0	0.0	-63%
Hazardous & E-waste	0.7	7.3	903%
SPECIAL WASTE	7.0	2.0	-71%
Ash	3.5	0.5	-85%
Industrial Sludge	-	-	N/A
Treated Medical Waste	0.0	0.1	745%
Bulky Items	3.3	0.7	-78%
Tires	0.2	0.6	163%
R/C Special Waste	-	0.1	N/A
MIXED RESIDUE	-	34.3	N/A
Mixed Residue	-	34.3	N/A
TOTAL	978.5	554.5	-43%

Table 16: 1995/96 to 2006/07 Residential Waste per Household Comparison

POUNDS PER HOUSEHOLD			
Material Name	Residential		Percent Change
	95/96	06/07	
PAPER	780.2	274.8	-65%
Uncoated Corrugated Cardboard	84.7	22.7	-73%
Paper Bags/Kraft	4.7	9.2	97%
Newspaper	46.1	30.5	-34%
White Ledger	94.1	9.6	-90%
Colored Ledger	17.5	0.5	-97%
Computer Paper	3.0	-	-100%
Other Office Paper	0.2	9.3	3635%
Magazines & Catalogs	3.5	20.4	484%
Phone Books & Directories	71.1	0.4	-100%
Other Recyclable Paper	241.7	66.1	-73%
Other Compostable Paper	192.4	92.5	-52%
R/C Paper	21.2	13.6	-36%
GLASS	91.1	30.4	-67%
Clear Bottles & Containers	44.7	12.6	-72%
Green Bottles & Containers	16.6	10.6	-36%
Brown Bottles & Containers	18.4	4.3	-77%
Flat Glass	2.0	-	-100%
R/C Glass	9.5	2.9	-70%
METAL	161.0	50.9	-68%
Tin/Steel Cans	41.5	8.4	-80%
Other Ferrous	44.0	-	-100%
Aluminum Cans	10.6	21.4	102%
Other Non-Ferrous	6.9	3.0	-57%
Major Appliances	11.2	3.9	-66%
R/C Metal	46.7	14.2	-70%
ORGANICS	944.8	745.3	-21%
Food	439.2	515.6	17%
Leaves & Grass	94.6	48.4	-49%
Prunings & Trimmings	62.0	5.8	-91%
Branches & Stumps	9.6	2.5	-74%
Agricultural Crop Residues	-	-	N/A
Manures	-	2.3	N/A
Textiles	80.4	52.7	-34%
Carpet & Carpet Padding	59.5	14.8	-75%
R/C Organics	199.5	103.0	-48%
PLASTIC	194.1	124.1	-36%
Other PETE Containers	10.3	2.1	-80%
PETE Bottles	0.6	9.1	1331%
HDPE Natural Bottles	7.4	2.8	-63%
HDPE Colored Bottles	12.1	3.7	-70%
Other HDPE Containers	2.1	1.9	-8%
Plastic Film	85.7	64.9	-24%
#3-#7 Plastics	50.5	6.8	-86%
R/C Plastic	25.5	32.9	29%
CONSTRUCTION & DEMOLITION	222.7	107.6	-52%
Rock, Soil, & Fines	70.7	29.6	-58%
Concrete	16.8	7.0	-58%
Asphalt Paving & Roofing	19.2	2.9	-85%
Clean Gypsum Board	13.2	8.1	-39%
Wood	72.2	33.5	-54%
R/C C&D	30.6	26.5	-13%
HAZARDOUS & E-WASTE	7.1	22.1	213%
Paint	1.0	1.7	68%
Vehicle/Equipment Fluids & Oil	2.5	0.3	-88%
Small & Household Batteries	1.7	1.0	-43%
Large Rechargeable Batteries	0.1	0.0	-60%
Hazardous & E-waste	1.8	19.1	961%
SPECIAL WASTE	17.4	5.3	-69%
Ash	8.8	1.4	-84%
Industrial Sludge	-	-	N/A
Treated Medical Waste	0.0	0.3	794%
Bulky Items	8.1	1.9	-77%
Tires	0.5	1.5	178%
R/C Special Waste	-	0.2	N/A
MIXED RESIDUE	-	89.6	N/A
Mixed Residue	-	89.6	N/A
TOTAL	2,418.5	1,450.1	-40%

Appendix F. 2004 CIWMB State Waste Characterization Comparison to 2006/07 SCWMA Waste Characterization Study

Table 17. CIWMB 2004 to Sonoma 2006/07 Major Waste Class Comparisons, by Sector

	Overall		Residential		Commercial		Self-Hauled	
	CIWMB 2004	Sonoma 06/07	CIWMB 2004	Sonoma 06/07	CIWMB 2004	Sonoma 06/07	CIWMB 2004	Sonoma 06/07
Paper	20.99%	15.82%	22.21%	18.95%	26.48%	20.61%	7.10%	7.47%
Glass	2.32%	2.57%	3.76%	2.09%	1.96%	2.59%	1.00%	2.96%
Metal	7.74%	3.88%	6.04%	3.51%	8.75%	4.59%	8.02%	3.39%
Organics	30.24%	35.70%	42.71%	51.39%	29.23%	42.46%	13.99%	13.93%
Plastic	9.47%	7.14%	9.45%	8.56%	12.01%	10.23%	3.91%	2.27%
C&D	21.70%	28.84%	10.80%	7.42%	14.11%	15.04%	54.56%	63.89%
Haz. & E-Waste	1.38%	1.24%	1.89%	1.52%	1.36%	1.59%	0.68%	0.58%
Special Waste	5.07%	1.78%	1.23%	0.37%	5.15%	1.72%	10.56%	3.11%
Mixed Residue	1.09%	3.03%	1.90%	6.18%	0.95%	1.17%	0.18%	2.40%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 13. CIWMB 2004 to Sonoma 2006/07 Major Waste Class Comparisons, by Sector

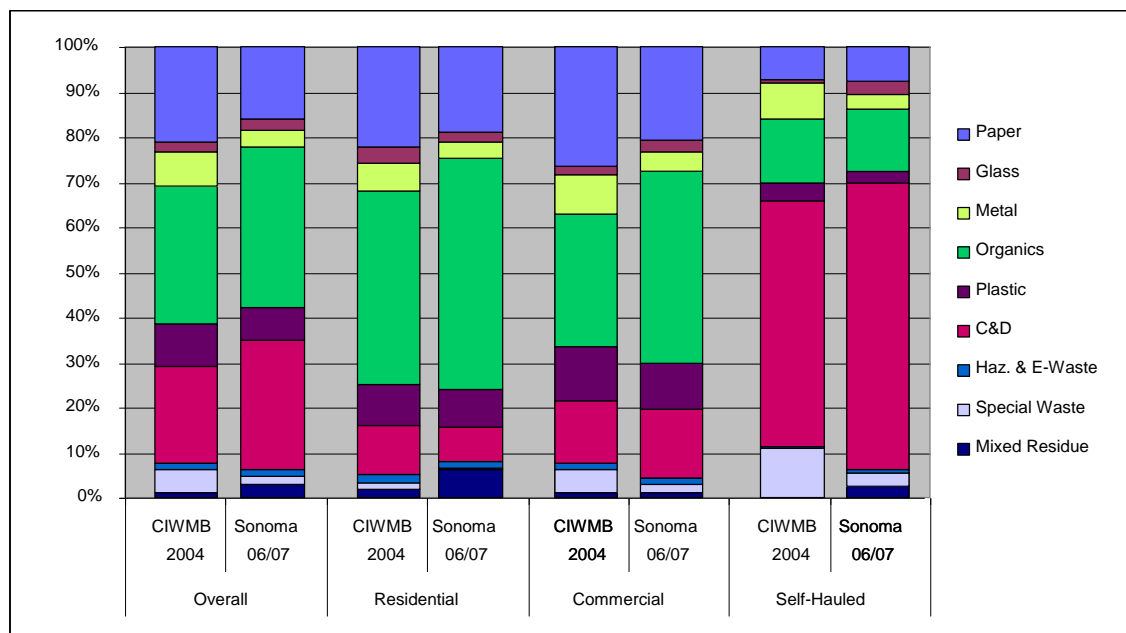


Table 18. CIWMB 04 to 06/07 Sonoma Waste Characterization Comparisons, by Sector (Percents)

Material Name	Overall		Residential		Commercial		Self-hauled	
	CIWMB 2004	Sonoma 06/07	CIWMB 2004	Sonoma 06/07	CIWMB 2004	Sonoma 06/07	CIWMB 2004	Sonoma 06/07
PAPER	20.99%	15.82%	22.21%	18.95%	26.48%	20.61%	7.10%	7.47%
Uncoated Corrugated Cardboard	5.75%	1.95%	3.61%	1.56%	8.27%	2.96%	3.34%	1.11%
Paper Bags/Kraft	0.96%	0.34%	0.75%	0.63%	1.49%	0.29%	0.11%	0.15%
Newspaper	2.20%	1.64%	3.65%	2.11%	2.12%	2.20%	0.24%	0.58%
White Ledger	1.11%	0.55%	1.25%	0.66%	1.24%	0.92%	0.63%	0.02%
Colored Ledger	0.05%	0.06%	0.06%	0.03%	0.06%	0.11%	0.02%	0.02%
Computer Paper	0.05%	0.07%	0.02%	0.00%	0.09%	0.20%	0.01%	0.00%
Other Office Paper	0.74%	0.54%	0.67%	0.64%	0.99%	0.89%	0.28%	0.05%
Magazines & Catalogs	0.77%	0.91%	1.19%	1.41%	0.73%	0.93%	0.25%	0.45%
Phone Books & Directories	0.22%	0.02%	0.40%	0.02%	0.16%	0.01%	0.10%	0.02%
Other Recyclable Paper	3.48%	3.65%	3.89%	4.56%	4.34%	4.12%	0.97%	2.29%
R/C Paper	5.65%	6.09%	6.72%	7.32%	6.98%	7.99%	1.16%	2.77%
GLASS	2.32%	2.57%	3.76%	2.09%	1.96%	2.59%	1.00%	2.96%
Clear Glass	0.89%	0.73%	1.64%	0.87%	0.62%	1.01%	0.36%	0.27%
Green Glass	0.45%	0.45%	0.92%	0.73%	0.30%	0.43%	0.07%	0.22%
Brown Glass	0.26%	0.26%	0.72%	0.30%	0.06%	0.25%	0.03%	0.24%
Other Colored Glass	0.01%	0.01%	0.01%	0.00%	0.00%	0.01%	0.01%	0.00%
Flat Glass	0.38%	0.16%	0.08%	0.00%	0.73%	0.17%	0.04%	0.28%
R/C Glass	0.35%	0.97%	0.40%	0.19%	0.25%	0.72%	0.49%	1.95%
METAL	7.74%	3.88%	6.04%	3.51%	8.75%	4.59%	8.02%	3.39%
Tin/Steel Cans	0.80%	0.52%	1.02%	0.58%	0.89%	0.60%	0.28%	0.37%
Other Ferrous	2.41%	1.91%	1.60%	1.48%	2.39%	2.34%	3.65%	1.80%
Aluminum Cans	0.19%	0.14%	0.37%	0.21%	0.13%	0.18%	0.03%	0.04%
Other Non-Ferrous	0.28%	0.35%	0.22%	0.27%	0.34%	0.22%	0.23%	0.58%
Major Appliances	1.53%	0.04%	0.00%	0.00%	2.82%	0.00%	0.96%	0.11%
R/C Metal	2.53%	0.92%	2.82%	0.98%	2.18%	1.25%	2.87%	0.50%
ORGANICS	30.24%	35.70%	42.71%	51.39%	29.23%	42.46%	13.99%	13.93%
Food	14.55%	21.16%	17.29%	35.56%	18.84%	27.84%	1.05%	0.63%
Leaves & Grass	4.22%	3.98%	7.83%	3.34%	2.41%	4.49%	2.83%	3.93%
Prunings & Trimmings	2.29%	1.68%	5.29%	0.40%	0.74%	1.55%	1.25%	2.96%
Branches & Stumps	0.30%	0.29%	0.13%	0.17%	0.19%	0.18%	0.79%	0.53%
Agricultural Crop Residues	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Manures	0.09%	0.16%	0.28%	0.16%	0.01%	0.08%	0.00%	0.25%
Textiles	2.36%	2.44%	3.51%	3.63%	2.29%	2.11%	0.78%	1.75%
Carpet & Carpet Padding	2.08%	1.79%	1.36%	1.02%	1.49%	1.26%	4.47%	3.07%
R/C Organics	4.36%	4.21%	7.01%	7.10%	3.27%	4.93%	2.82%	0.81%
PLASTIC	9.47%	7.14%	9.45%	8.56%	12.01%	10.23%	3.91%	2.27%
PETE Containers	0.54%	0.45%	0.86%	0.77%	0.51%	0.55%	0.11%	0.06%
HDPE Containers	0.47%	0.47%	0.82%	0.57%	0.42%	0.61%	0.07%	0.22%
Miscellaneous Plastic Containers	0.51%	0.37%	0.67%	0.47%	0.62%	0.32%	0.04%	0.33%
Recyclable Plastic Film	1.32%	0.27%	0.97%	0.27%	1.58%	0.44%	1.24%	0.07%
Non-recyclable Film	3.03%	2.83%	2.46%	4.21%	4.65%	4.05%	0.28%	0.19%
Durable Plastic Items	1.40%	1.20%	1.31%	0.80%	1.52%	1.75%	1.26%	0.91%
R/C Plastic	2.21%	1.54%	2.35%	1.47%	2.70%	2.49%	0.91%	0.48%
CONSTRUCTION & DEMOLITION	21.70%	28.84%	10.80%	7.42%	14.11%	15.04%	54.56%	63.89%
Concrete	2.40%	1.67%	0.73%	0.49%	1.82%	0.90%	6.16%	3.63%
Asphalt Paving	0.03%	0.49%	0.00%	0.11%	0.04%	0.87%	0.04%	0.37%
Asphalt Roofing	1.91%	2.23%	0.06%	0.09%	0.81%	1.06%	7.06%	5.50%
Lumber	9.65%	13.06%	4.18%	2.31%	7.92%	5.51%	21.54%	31.39%
Clean Gypsum Board	1.68%	1.83%	1.21%	0.56%	0.37%	0.19%	5.26%	4.87%
Rock, Soil, & Fines	2.43%	3.20%	2.66%	2.04%	1.11%	3.88%	5.00%	3.44%
R/C C&D	3.61%	6.35%	1.96%	1.83%	2.04%	2.64%	9.50%	14.69%
HAZARDOUS & E-WASTE	1.38%	1.24%	1.89%	1.52%	1.36%	1.59%	0.68%	0.58%
Paint	0.05%	0.26%	0.09%	0.12%	0.04%	0.48%	0.02%	0.12%
Vehicle & Equipment Fluids	0.00%	0.01%	0.00%	0.02%	0.00%	0.00%	0.01%	0.01%
Used Oil & Oil Filters	0.00%	0.02%	0.01%	0.00%	0.00%	0.02%	0.00%	0.03%
Batteries	0.08%	0.05%	0.19%	0.07%	0.04%	0.02%	0.03%	0.08%
Universal Waste	0.63%	0.29%	0.77%	0.47%	0.57%	0.29%	0.58%	0.13%
Covered Electronic Waste	0.56%	0.28%	0.77%	0.55%	0.68%	0.20%	0.00%	0.14%
R/C Haz & Ewaste	0.05%	0.33%	0.07%	0.30%	0.03%	0.59%	0.05%	0.07%
SPECIAL WASTE	5.07%	1.78%	1.23%	0.37%	5.15%	1.72%	10.56%	3.11%
Ash	0.15%	0.03%	0.07%	0.10%	0.14%	0.01%	0.30%	0.00%
Sewage Solids	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Industrial Sludge	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Treated Medical Waste	0.04%	0.01%	0.00%	0.02%	0.08%	0.01%	0.00%	0.01%
Bulky Items	3.35%	1.14%	0.96%	0.13%	1.84%	0.44%	10.21%	2.86%
Tires	0.31%	0.29%	0.13%	0.11%	0.57%	0.46%	0.03%	0.24%
R/C Special Waste	1.21%	0.31%	0.07%	0.02%	2.53%	0.80%	0.02%	0.00%
MIXED RESIDUE	1.09%	3.03%	1.90%	6.18%	0.95%	1.17%	0.18%	2.40%
Mix Residue	1.09%	3.03%	1.90%	6.18%	0.95%	1.17%	0.18%	2.40%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix G. Jurisdictional Analysis

This appendix presents the findings from the jurisdictional waste characterization analysis for Sonoma County. This study was not designed to provide statistically representative data for each of the 10 jurisdictions in Sonoma County. Thus, some of the sample sizes are extremely small and therefore the findings for those analyses have wide error ranges. Each jurisdiction and the number of samples included in the analysis for each waste stream are listed below.

Table 19: Waste Samples Collected by Waste Stream and Jurisdiction³

Jurisdiction	Commercially Collected Waste Samples	Self-hauled Waste Samples	Total Samples
Cloverdale	4	9	13
Cotati	5	7	12
Healdsburg	12	25	37
Petaluma	50	46	96
Rohnert Park	22	13	35
Santa Rosa	76	59	135
Sebastopol	6	19	25
Sonoma	32	66	98
Town of Windsor	24	15	39
Unincorporated Sonoma	18	35	53
Unknown	4	8	12
Total	253	302	555

³ The phrase “commercially collected waste” is used in this appendix to indicate residential and commercial waste hauled by the jurisdiction’s local garbage hauler.

Table 20: Cloverdale Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	18.3%		Organics	22.10%	
Uncoated Corrugated Cardboard	2.14%	1.5%	Food	10.49%	11.1%
Paper Bags/Kraft	0.48%	0.5%	Leaves & Grass	6.21%	9.0%
Newspaper	1.74%	2.5%	Prunings & Trimmings	0.27%	0.5%
White Ledger	3.15%	4.9%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.08%	0.1%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.25%	0.4%	Textiles	0.86%	1.4%
Magazines & Catalogs	2.49%	3.5%	Carpet	1.17%	1.8%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	3.05%	3.2%	Remainder/ Composite Organics	3.10%	3.2%
Other Compostable Paper	4.33%	4.3%	Construction & Demolition	32.46%	
Remainder/ Composite Paper	0.63%	0.9%	Concrete	0.00%	0.0%
Glass	0.55%		Asphalt Paving	0.00%	0.0%
Clear Bottles & Containers – CRV	0.11%	0.1%	Asphalt Roofing	2.83%	4.6%
Clear Bottles & Containers – non-CRV	0.03%	0.1%	Clean recyclable wood (non-treated)	0.62%	0.9%
Green Bottles & Containers – CRV	0.00%	0.0%	Other Untreated/ Recyclable Wood	3.43%	4.7%
Green Bottles & Containers – Non-CRV	0.13%	0.2%	Treated Wood Waste	0.00%	0.0%
Brown Bottles & Containers – CRV	0.00%	0.0%	Clean Gypsum Board	0.64%	1.1%
Brown Bottles & Containers – Non-CRV	0.04%	0.1%	Rock, Soil, & Fines	21.06%	35.5%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Remainder/ Composite C&D	3.88%	3.3%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Hazardous & E-Waste	0.03%	
Flat Glass	0.00%	0.0%	Paint	0.00%	0.0%
Remainder/ Composite Glass	0.23%	0.2%	Vehicle & Equipment Fluids	0.00%	0.0%
Plastic	6.46%		Used Oil & Oil Filters	0.00%	0.0%
PETE Bottles – CRV	0.40%	0.3%	Large Rechargeable Batteries	0.00%	0.0%
PETE Bottles – Non-CRV	0.17%	0.2%	Small Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – CRV	0.00%	0.0%	Household Batteries	0.03%	0.0%
Other PETE Containers – Non-CRV	0.12%	0.1%	Universal Waste	0.00%	0.0%
HDPE Natural Bottles – CRV	0.01%	0.0%	Covered Electronic Waste	0.00%	0.0%
HDPE Natural Bottles – Non-CRV	0.08%	0.1%	Fluorescent Tubes	0.00%	0.0%
HDPE Colored Bottles – CRV	0.00%	0.0%	Other HHW	0.00%	0.0%
HDPE Colored Bottles – Non-CRV	0.12%	0.2%	Remainder/ Composite Hazardous & E-waste	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Special Waste	5.39%	
Other HDPE Containers – Non-CRV	0.98%	1.5%	Ash	0.00%	0.0%
#3-#7 Bottles – CRV	0.00%	0.0%	Sewage Solids	0.00%	0.0%
#3-#7 Bottles – Non-CRV	0.03%	0.0%	Industrial Sludge	0.00%	0.0%
#3-#7 Other Containers – CRV	0.00%	0.0%	Treated Medical Waste	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.22%	0.2%	Bulky Items	0.00%	0.0%
Recyclable Plastic Film	0.15%	0.2%	Tires	0.00%	0.0%
Non-recyclable Film	2.45%	2.2%	Remainder/ Composite Special Waste	5.39%	8.4%
Durable Plastic Items	0.42%	0.3%	Mixed Residue	0.00%	
Remainder/ Composite Plastic	1.33%	1.2%	Remainder/ Composite Mixed Residue	0.00%	0.0%
Metal	14.67%				
Tin/Steel Cans	0.27%	0.3%			
Major Appliances	0.00%	0.0%			
Other Ferrous	13.91%	21.9%			
Aluminum Cans – CRV	0.09%	0.1%			
Aluminum Cans – Non-CRV	0.00%	0.0%			
Other Non-Ferrous	0.23%	0.2%			
Remainder/ Composite Metal	0.17%	0.3%			
			Samples:	4	

Table 21: Cloverdale Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	17.9%		Organics	26.38%	
Uncoated Corrugated Cardboard	2.39%	2.6%	Food	1.86%	2.0%
Paper Bags/Kraft	0.07%	0.1%	Leaves & Grass	0.22%	0.3%
Newspaper	1.29%	1.7%	Prunings & Trimmings	3.22%	3.5%
White Ledger	0.13%	0.1%	Branches & Stumps	0.26%	0.4%
Colored Ledger	0.23%	0.3%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.12%	0.2%	Textiles	2.07%	2.2%
Magazines & Catalogs	0.98%	1.4%	Carpet	14.79%	22.0%
Phone Books & Directories	0.33%	0.6%	Carpet Padding	3.66%	5.5%
Other Recyclable Paper	6.70%	5.8%	R/C Organics	0.30%	0.5%
Other Compostable Paper	1.28%	1.1%			
Remainder/ Composite Paper	4.39%	4.3%	Construction & Demolition	29.77%	
			Concrete	0.35%	0.6%
Glass	4.48%		Asphalt Paving	0.00%	0.0%
Clear Glass	0.51%	0.6%	Asphalt Roofing	4.45%	6.7%
Green Glass	0.18%	0.3%	Clean recyclable wood	2.77%	2.9%
Brown Glass	0.97%	1.2%	Other Recyclable Wood	5.31%	4.4%
Other Colored Glass	0.00%	0.0%	Treated Wood Waste	4.93%	3.7%
Flat Glass	0.62%	1.1%	Clean Gypsum Board	0.00%	0.0%
R/C Glass	2.20%	2.7%	Rock, Soil, & Fines	0.00%	0.0%
			R/C C&D	11.95%	7.7%
Plastic	2.68%		Hazardous & E-Waste	1.06%	
PET Bottles	0.11%	0.1%	Paint	0.00%	0.0%
Other PET Contnrs	0.01%	0.0%	Vehicle & Equipment Fluids	0.33%	0.6%
HDPE Nat. Bottles	0.04%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
HDPE Colored Bottles	0.05%	0.1%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.52%	0.7%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.01%	0.0%	Household Batteries	0.18%	0.3%
#3-#7 Other Contnrs	0.06%	0.1%	Universal Waste	0.00%	0.0%
Recyclable Plastic Film	0.32%	0.4%	Covered Electronic Waste	0.53%	0.8%
Non-recyclable Film	0.57%	0.3%	Fluorescent Tubes	0.03%	0.1%
Durable Plastic Items	0.64%	0.7%	Other HHW	0.00%	0.0%
R/C Plastic	0.36%	0.3%	R/C Hazardous & E-waste	0.00%	0.0%
Metal	11.63%		Special Waste	2.89%	
Tin/Steel Cans	4.99%	7.2%	Ash	0.00%	0.0%
Major Appliances	0.00%	0.0%	Sewage Solids	0.00%	0.0%
Other Ferrous	4.71%	5.6%	Industrial Sludge	0.00%	0.0%
Aluminum Cans	0.11%	0.1%	Treated Medical Waste	0.00%	0.0%
Other Non-Ferrous	0.44%	0.4%	Bulky Items	2.89%	4.2%
R/C Metal	1.39%	1.3%	Tires	0.00%	0.0%
			R/C Special Waste	0.00%	0.0%
			Mixed Residue	3.21%	
			Mix Residue	3.21%	4.0%
			Samples:	9	

Table 22: Cotati Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	24.9%		Organics	39.45%	
Uncoated Corrugated Cardboard	6.84%	7.8%	Food	23.42%	17.3%
Paper Bags/Kraft	0.34%	0.2%	Leaves & Grass	6.99%	8.3%
Newspaper	0.78%	0.7%	Prunings & Trimmings	0.00%	0.0%
White Ledger	0.00%	0.0%	Branches & Stumps	0.61%	1.0%
Colored Ledger	0.00%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	1.08%	1.1%	Textiles	2.89%	3.6%
Magazines & Catalogs	0.39%	0.4%	Carpet	0.00%	0.0%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	3.08%	1.9%	Remainder/ Composite Organics	5.54%	4.7%
Other Compostable Paper	3.81%	2.3%			
Remainder/ Composite Paper	8.60%	10.8%	Construction & Demolition	9.33%	
Glass	1.92%		Concrete	0.00%	0.0%
Clear Bottles & Containers – CRV	0.77%	0.3%	Asphalt Paving	0.45%	0.7%
Clear Bottles & Containers – non-CRV	0.28%	0.2%	Asphalt Roofing	0.00%	0.0%
Green Bottles & Containers – CRV	0.29%	0.3%	Clean recyclable wood (non-treated)	3.37%	5.4%
Green Bottles & Containers – Non-CRV	0.16%	0.3%	Other Untreated/ Recyclable Wood	0.00%	0.0%
Brown Bottles & Containers – CRV	0.42%	0.4%	Treated Wood Waste	0.21%	0.3%
Brown Bottles & Containers – Non-CRV	0.00%	0.0%	Clean Gypsum Board	0.00%	0.0%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	2.76%	3.4%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Remainder/ Composite C&D	2.55%	3.6%
Flat Glass	0.00%	0.0%			
Remainder/ Composite Glass	0.00%	0.0%	Hazardous & E-Waste	6.10%	
Plastic	10.43%		Paint	2.61%	4.2%
PETE Bottles – CRV	0.32%	0.2%	Vehicle & Equipment Fluids	0.00%	0.0%
PETE Bottles – Non-CRV	0.09%	0.1%	Used Oil & Oil Filters	0.11%	0.2%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.06%	0.1%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.02%	0.0%	Household Batteries	0.00%	0.0%
HDPE Natural Bottles – Non-CRV	0.09%	0.1%	Universal Waste	0.00%	0.0%
HDPE Colored Bottles – CRV	0.00%	0.0%	Covered Electronic Waste	0.73%	1.2%
HDPE Colored Bottles – Non-CRV	0.21%	0.2%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Other HHW	1.19%	2.0%
Other HDPE Containers – Non-CRV	0.01%	0.0%	Remainder/ Composite Hazardous & E-waste	1.47%	2.4%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.08%	0.1%	Special Waste	0.00%	
#3-#7 Other Containers – CRV	0.00%	0.0%	Ash	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.31%	0.2%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	2.25%	2.1%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	5.31%	4.9%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	0.97%	0.7%	Bulky Items	0.00%	0.0%
Remainder/ Composite Plastic	0.72%	0.6%	Tires	0.00%	0.0%
			Remainder/ Composite Special Waste	0.00%	0.0%
Metal	1.61%		Mixed Residue	6.24%	
Tin/Steel Cans	0.73%	0.4%	Remainder/ Composite Mixed Residue	6.24%	9.1%
Major Appliances	0.00%	0.0%			
Other Ferrous	0.13%	0.2%			
Aluminum Cans – CRV	0.21%	0.2%			
Aluminum Cans – Non-CRV	0.00%	0.0%			
Other Non-Ferrous	0.07%	0.1%			
Remainder/ Composite Metal	0.46%	0.7%			
			Samples:	5	

Table 23: Cotati Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	4.7%		Organics	5.59%	
Uncoated Corrugated Cardboard	0.31%	0.4%	Food	0.26%	0.5%
Paper Bags/Kraft	0.04%	0.1%	Leaves & Grass	2.97%	5.7%
Newspaper	0.00%	0.0%	Prunings & Trimmings	2.24%	4.3%
White Ledger	0.00%	0.0%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.00%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.00%	0.0%	Textiles	0.12%	0.2%
Magazines & Catalogs	0.00%	0.0%	Carpet	0.00%	0.0%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	0.99%	0.7%	R/C Organics	0.00%	0.0%
Other Compostable Paper	0.43%	0.7%			
Remainder/ Composite Paper	2.90%	4.3%	Construction & Demolition	81.70%	
			Concrete	1.84%	3.5%
Glass	3.69%		Asphalt Paving	0.00%	0.0%
Clear Glass	0.00%	0.0%	Asphalt Roofing	2.97%	5.6%
Green Glass	0.00%	0.0%	Clean recyclable wood	7.56%	8.6%
Brown Glass	0.00%	0.0%	Other Recyclable Wood	22.86%	11.8%
Other Colored Glass	0.00%	0.0%	Treated Wood Waste	17.94%	10.3%
Flat Glass	0.00%	0.0%	Clean Gypsum Board	14.13%	8.2%
R/C Glass	3.69%	6.7%	Rock, Soil, & Fines	0.16%	0.3%
			R/C C&D	14.26%	6.7%
Plastic	2.28%		Hazardous & E-Waste	0.00%	
PET Bottles	0.03%	0.0%	Paint	0.00%	0.0%
Other PET Contnrs	0.00%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
HDPE Nat. Bottles	0.00%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
HDPE Colored Bottles	0.01%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.04%	0.1%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.00%	0.0%	Household Batteries	0.00%	0.0%
#3-#7 Other Contnrs	0.01%	0.0%	Universal Waste	0.00%	0.0%
Recyclable Plastic Film	0.00%	0.0%	Covered Electronic Waste	0.00%	0.0%
Non-recyclable Film	0.25%	0.3%	Fluorescent Tubes	0.00%	0.0%
Durable Plastic Items	1.25%	2.1%	Other HHW	0.00%	0.0%
R/C Plastic	0.69%	0.9%	R/C Hazardous & E-waste	0.00%	0.0%
			Special Waste	0.00%	
Metal	2.05%		Ash	0.00%	0.0%
Tin/Steel Cans	0.00%	0.0%	Sewage Solids	0.00%	0.0%
Major Appliances	0.00%	0.0%	Industrial Sludge	0.00%	0.0%
Other Ferrous	1.87%	0.8%	Treated Medical Waste	0.00%	0.0%
Aluminum Cans	0.05%	0.0%	Bulky Items	0.00%	0.0%
Other Non-Ferrous	0.00%	0.0%	Tires	0.00%	0.0%
R/C Metal	0.14%	0.2%	R/C Special Waste	0.00%	0.0%
			Mixed Residue	0.00%	
			Mix Residue	0.00%	0.0%
			Samples:	7	

Table 24: Healdsburg Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	16.9%		Organics	45.41%	
Uncoated Corrugated Cardboard	1.94%	0.9%	Food	29.91%	9.0%
Paper Bags/Kraft	0.66%	0.3%	Leaves & Grass	4.18%	4.1%
Newspaper	1.91%	0.7%	Prunings & Trimmings	0.00%	0.0%
White Ledger	0.63%	0.3%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.04%	0.1%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.08%	0.1%	Manures	0.00%	0.0%
Other Office Paper	0.78%	0.6%	Textiles	2.20%	1.1%
Magazines & Catalogs	0.99%	0.9%	Carpet	2.81%	2.7%
Phone Books & Directories	0.08%	0.1%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	3.01%	1.4%	Remainder/ Composite Organics	6.32%	4.5%
Other Compostable Paper	5.08%	1.6%			
Remainder/ Composite Paper	1.65%	1.6%	Construction & Demolition	11.89%	
Glass	1.91%		Concrete	0.04%	0.1%
Clear Bottles & Containers – CRV	0.28%	0.2%	Asphalt Paving	1.01%	1.7%
Clear Bottles & Containers – non-CRV	0.24%	0.2%	Asphalt Roofing	3.35%	5.5%
Green Bottles & Containers – CRV	0.29%	0.2%	Clean recyclable wood (non-treated)	0.90%	0.6%
Green Bottles & Containers – Non-CRV	0.45%	0.4%	Other Untreated/ Recyclable Wood	0.44%	0.4%
Brown Bottles & Containers – CRV	0.33%	0.3%	Treated Wood Waste	1.56%	1.4%
Brown Bottles & Containers – Non-CRV	0.05%	0.1%	Clean Gypsum Board	0.47%	0.7%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	2.25%	2.2%
Other Colored Bottles & Containers – Non-CRV	0.05%	0.1%	Remainder/ Composite C&D	1.88%	1.6%
Flat Glass	0.00%	0.0%			
Remainder/ Composite Glass	0.22%	0.2%	Hazardous & E-Waste	0.02%	
Plastic	13.86%		Paint	0.00%	0.0%
PETE Bottles – CRV	0.37%	0.2%	Vehicle & Equipment Fluids	0.00%	0.0%
PETE Bottles – Non-CRV	0.08%	0.1%	Used Oil & Oil Filters	0.00%	0.0%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.05%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.11%	0.1%	Household Batteries	0.00%	0.0%
HDPE Natural Bottles – Non-CRV	0.21%	0.2%	Universal Waste	0.01%	0.0%
HDPE Colored Bottles – CRV	0.00%	0.0%	Covered Electronic Waste	0.00%	0.0%
HDPE Colored Bottles – Non-CRV	0.27%	0.2%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.03%	0.0%	Other HHW	0.00%	0.0%
Other HDPE Containers – Non-CRV	0.15%	0.1%	Remainder/ Composite Hazardous & E-waste	0.01%	0.0%
#3-#7 Bottles – CRV	0.02%	0.0%			
#3-#7 Bottles – Non-CRV	0.11%	0.1%	Special Waste	1.10%	
#3-#7 Other Containers – CRV	0.03%	0.0%	Ash	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.17%	0.1%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.49%	0.4%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	8.24%	7.9%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	1.04%	1.1%	Bulky Items	0.00%	0.0%
Remainder/ Composite Plastic	2.49%	1.6%	Tires	0.92%	1.3%
			Remainder/ Composite Special Waste	0.18%	0.3%
Metal	6.84%				
Tin/Steel Cans	0.55%	0.2%	Mixed Residue	2.11%	
Major Appliances	0.00%	0.0%	Remainder/ Composite Mixed Residue	2.11%	2.4%
Other Ferrous	4.30%	6.0%			
Aluminum Cans – CRV	0.29%	0.1%			
Aluminum Cans – Non-CRV	0.00%	0.0%	Samples:	12	
Other Non-Ferrous	0.30%	0.3%			
Remainder/ Composite Metal	1.39%	1.1%			

Table 25: Healdsburg Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	17.2%		Organics	15.86%	
Uncoated Corrugated Cardboard	1.02%	0.9%	Food	0.04%	0.1%
Paper Bags/Kraft	0.08%	0.1%	Leaves & Grass	0.47%	0.6%
Newspaper	0.52%	0.6%	Prunings & Trimmings	1.70%	2.3%
White Ledger	0.03%	0.0%	Branches & Stumps	0.06%	0.1%
Colored Ledger	0.03%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.05%	0.1%	Textiles	8.85%	6.4%
Magazines & Catalogs	0.98%	0.7%	Carpet	2.93%	2.0%
Phone Books & Directories	0.06%	0.1%	Carpet Padding	0.14%	0.2%
Other Recyclable Paper	7.32%	8.2%	R/C Organics	1.67%	2.0%
Other Compostable Paper	1.20%	1.1%			
Remainder/ Composite Paper	5.87%	3.4%	Construction & Demolition	45.82%	
Glass	6.49%		Concrete	11.94%	14.5%
Clear Glass	0.00%	0.0%	Asphalt Paving	0.00%	0.0%
Green Glass	0.11%	0.2%	Asphalt Roofing	0.00%	0.0%
Brown Glass	0.00%	0.0%	Clean recyclable wood	6.41%	4.9%
Other Colored Glass	0.00%	0.0%	Other Recyclable Wood	1.81%	2.1%
Flat Glass	0.42%	0.7%	Treated Wood Waste	13.45%	11.9%
R/C Glass	5.96%	6.2%	Clean Gypsum Board	4.02%	4.6%
Plastic	5.04%		Rock, Soil, & Fines	2.41%	2.5%
PET Bottles	0.03%	0.0%	R/C C&D	5.78%	5.1%
Other PET Contnrs	0.00%	0.0%	Hazardous & E-Waste	1.76%	
HDPE Nat. Bottles	0.01%	0.0%	Paint	0.00%	0.0%
HDPE Colored Bottles	0.01%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
Other HDPE Contnrs	0.08%	0.1%	Used Oil & Oil Filters	0.00%	0.0%
#3-#7 Bottles	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
#3-#7 Other Contnrs	0.04%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
Recyclable Plastic Film	0.02%	0.0%	Household Batteries	0.07%	0.1%
Non-recyclable Film	0.25%	0.1%	Universal Waste	1.32%	2.0%
Durable Plastic Items	4.07%	4.9%	Covered Electronic Waste	0.36%	0.4%
R/C Plastic	0.53%	0.4%	Fluorescent Tubes	0.00%	0.0%
Metal	1.94%		Other HHW	0.00%	0.0%
Tin/Steel Cans	0.16%	0.2%	R/C Hazardous & E-waste	0.00%	0.0%
Major Appliances	0.00%	0.0%	Special Waste	5.30%	
Other Ferrous	0.59%	0.5%	Ash	0.00%	0.0%
Aluminum Cans	0.00%	0.0%	Sewage Solids	0.00%	0.0%
Other Non-Ferrous	0.38%	0.3%	Industrial Sludge	0.00%	0.0%
R/C Metal	0.81%	0.5%	Treated Medical Waste	0.00%	0.0%
			Bulky Items	5.30%	3.8%
			Tires	0.00%	0.0%
			R/C Special Waste	0.00%	0.0%
			Mixed Residue	0.63%	
			Mix Residue	0.63%	1.0%
			Samples:	25	

Table 26: Petaluma Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	21.2%		Organics	49.06%	
Uncoated Corrugated Cardboard	1.90%	0.6%	Food	31.09%	5.1%
Paper Bags/Kraft	0.60%	0.2%	Leaves & Grass	3.96%	2.8%
Newspaper	2.32%	0.8%	Prunings & Trimmings	2.35%	2.7%
White Ledger	0.86%	0.3%	Branches & Stumps	0.34%	0.4%
Colored Ledger	0.02%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.24%	0.2%
Other Office Paper	1.09%	0.5%	Textiles	2.91%	0.7%
Magazines & Catalogs	1.16%	0.3%	Carpet	1.14%	0.6%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	1.69%	2.1%
Other Recyclable Paper	4.89%	0.8%	Remainder/ Composite Organics	5.34%	1.4%
Other Compostable Paper	6.65%	1.7%			
Remainder/ Composite Paper	1.75%	0.8%	Construction & Demolition	8.02%	
Glass	3.25%		Concrete	0.64%	0.6%
Clear Bottles & Containers – CRV	0.42%	0.2%	Asphalt Paving	0.00%	0.0%
Clear Bottles & Containers – non-CRV	0.47%	0.2%	Asphalt Roofing	0.09%	0.1%
Green Bottles & Containers – CRV	0.10%	0.1%	Clean recyclable wood (non-treated)	0.55%	0.3%
Green Bottles & Containers – Non-CRV	0.14%	0.1%	Other Untreated/ Recyclable Wood	0.24%	0.2%
Brown Bottles & Containers – CRV	0.27%	0.1%	Treated Wood Waste	1.39%	0.8%
Brown Bottles & Containers – Non-CRV	0.04%	0.0%	Clean Gypsum Board	0.17%	0.2%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	2.53%	1.5%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Remainder/ Composite C&D	2.42%	1.2%
Flat Glass	0.92%	1.5%			
Remainder/ Composite Glass	0.89%	1.1%	Hazardous & E-Waste	2.28%	
Plastic	9.17%		Paint	0.21%	0.2%
PETE Bottles – CRV	0.37%	0.1%	Vehicle & Equipment Fluids	0.02%	0.0%
PETE Bottles – Non-CRV	0.15%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.12%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.06%	0.0%	Household Batteries	0.06%	0.0%
HDPE Natural Bottles – Non-CRV	0.14%	0.1%	Universal Waste	0.90%	0.8%
HDPE Colored Bottles – CRV	0.02%	0.0%	Covered Electronic Waste	0.56%	0.5%
HDPE Colored Bottles – Non-CRV	0.17%	0.1%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Other HHW	0.14%	0.2%
Other HDPE Containers – Non-CRV	0.09%	0.1%	Remainder/ Composite Hazardous & E-waste	0.41%	0.5%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.03%	0.0%	Special Waste	0.29%	
#3-#7 Other Containers – CRV	0.00%	0.0%	Ash	0.01%	0.0%
#3-#7 Other Containers – Non-CRV	0.39%	0.1%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.50%	0.5%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	4.31%	0.9%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	1.44%	0.6%	Bulky Items	0.28%	0.3%
Remainder/ Composite Plastic	1.37%	0.4%	Tires	0.00%	0.0%
			Remainder/ Composite Special Waste	0.00%	0.0%
Metal	3.11%		Mixed Residue	3.59%	
Tin/Steel Cans	0.59%	0.2%	Remainder/ Composite Mixed Residue	3.59%	1.6%
Major Appliances	0.00%	0.0%			
Other Ferrous	1.34%	0.6%			
Aluminum Cans – CRV	0.17%	0.0%			
Aluminum Cans – Non-CRV	0.05%	0.0%			
Other Non-Ferrous	0.17%	0.1%			
Remainder/ Composite Metal	0.78%	0.4%			
			Samples:	50	

Table 27: Petaluma Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	4.3%		Organics	11.61%	
Uncoated Corrugated Cardboard	0.44%	0.2%	Food	0.20%	0.3%
Paper Bags/Kraft	0.19%	0.2%	Leaves & Grass	3.19%	2.1%
Newspaper	0.27%	0.2%	Prunings & Trimmings	3.36%	3.1%
White Ledger	0.01%	0.0%	Branches & Stumps	0.54%	0.6%
Colored Ledger	0.03%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.03%	0.0%	Textiles	1.96%	1.7%
Magazines & Catalogs	0.96%	1.2%	Carpet	1.47%	2.3%
Phone Books & Directories	0.01%	0.0%	Carpet Padding	0.59%	0.7%
Other Recyclable Paper	1.06%	1.1%	R/C Organics	0.30%	0.2%
Other Compostable Paper	0.29%	0.2%			
Remainder/ Composite Paper	1.04%	0.6%	Construction & Demolition	71.37%	
			Concrete	4.68%	5.2%
Glass	1.03%		Asphalt Paving	0.00%	0.0%
Clear Glass	0.17%	0.2%	Asphalt Roofing	1.64%	1.7%
Green Glass	0.08%	0.1%	Clean recyclable wood	13.77%	6.4%
Brown Glass	0.08%	0.1%	Other Recyclable Wood	8.89%	4.9%
Other Colored Glass	0.00%	0.0%	Treated Wood Waste	20.98%	10.4%
Flat Glass	0.06%	0.1%	Clean Gypsum Board	8.22%	9.2%
R/C Glass	0.65%	0.6%	Rock, Soil, & Fines	5.58%	3.5%
			R/C C&D	7.62%	4.7%
Plastic	3.42%		Hazardous & E-Waste	0.17%	
PET Bottles	0.09%	0.1%	Paint	0.00%	0.0%
Other PET Contnrs	0.01%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
HDPE Nat. Bottles	0.02%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
HDPE Colored Bottles	0.02%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.72%	1.2%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.02%	0.0%	Household Batteries	0.00%	0.0%
#3-#7 Other Contnrs	1.39%	1.8%	Universal Waste	0.04%	0.1%
Recyclable Plastic Film	0.12%	0.1%	Covered Electronic Waste	0.00%	0.0%
Non-recyclable Film	0.16%	0.1%	Fluorescent Tubes	0.14%	0.2%
Durable Plastic Items	0.46%	0.3%	Other HHW	0.00%	0.0%
R/C Plastic	0.41%	0.2%	R/C Hazardous & E-waste	0.00%	0.0%
			Special Waste	1.89%	
Metal	5.70%		Ash	0.00%	0.0%
Tin/Steel Cans	0.83%	1.1%	Sewage Solids	0.00%	0.0%
Major Appliances	0.52%	0.9%	Industrial Sludge	0.00%	0.0%
Other Ferrous	3.58%	2.5%	Treated Medical Waste	0.00%	0.0%
Aluminum Cans	0.05%	0.0%	Bulky Items	0.84%	0.9%
Other Non-Ferrous	0.40%	0.5%	Tires	1.04%	1.7%
R/C Metal	0.32%	0.3%	R/C Special Waste	0.00%	0.0%
			Mixed Residue	0.48%	
			Mix Residue	0.48%	0.6%
			Samples:	46	

Table 28: Rohnert Park Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	20.3%		Organics	50.70%	
Uncoated Corrugated Cardboard	2.01%	0.6%	Food	33.21%	6.5%
Paper Bags/Kraft	0.46%	0.1%	Leaves & Grass	3.98%	2.7%
Newspaper	1.87%	0.6%	Prunings & Trimmings	0.64%	1.1%
White Ledger	1.21%	1.0%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.08%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.80%	1.3%	Manures	0.00%	0.0%
Other Office Paper	0.91%	0.6%	Textiles	3.44%	1.5%
Magazines & Catalogs	0.91%	0.4%	Carpet	0.99%	0.7%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	5.34%	1.7%	Remainder/ Composite Organics	8.44%	3.2%
Other Compostable Paper	4.93%	1.1%			
Remainder/ Composite Paper	1.76%	0.8%	Construction & Demolition	9.21%	
Glass	2.18%		Concrete	0.09%	0.1%
Clear Bottles & Containers – CRV	0.62%	0.2%	Asphalt Paving	1.74%	2.9%
Clear Bottles & Containers – non-CRV	0.45%	0.3%	Asphalt Roofing	0.37%	0.6%
Green Bottles & Containers – CRV	0.11%	0.1%	Clean recyclable wood (non-treated)	0.70%	0.5%
Green Bottles & Containers – Non-CRV	0.30%	0.2%	Other Untreated/ Recyclable Wood	1.23%	0.8%
Brown Bottles & Containers – CRV	0.50%	0.4%	Treated Wood Waste	0.68%	0.4%
Brown Bottles & Containers – Non-CRV	0.02%	0.0%	Clean Gypsum Board	1.68%	1.6%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	1.53%	1.8%
Other Colored Bottles & Containers – Non-CRV	0.02%	0.0%	Remainder/ Composite C&D	1.19%	1.0%
Flat Glass	0.00%	0.0%			
Remainder/ Composite Glass	0.16%	0.1%	Hazardous & E-Waste	2.28%	
Plastic	9.62%		Paint	0.86%	1.4%
PETE Bottles – CRV	0.56%	0.1%	Vehicle & Equipment Fluids	0.01%	0.0%
PETE Bottles – Non-CRV	0.25%	0.1%	Used Oil & Oil Filters	0.02%	0.0%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.04%	0.1%
Other PETE Containers – Non-CRV	0.09%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.10%	0.1%	Household Batteries	0.02%	0.0%
HDPE Natural Bottles – Non-CRV	0.14%	0.1%	Universal Waste	0.22%	0.3%
HDPE Colored Bottles – CRV	0.06%	0.1%	Covered Electronic Waste	0.96%	1.2%
HDPE Colored Bottles – Non-CRV	0.42%	0.1%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Other HHW	0.14%	0.2%
Other HDPE Containers – Non-CRV	0.03%	0.0%	Remainder/ Composite Hazardous & E-waste	0.02%	0.0%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.05%	0.0%	Special Waste	0.24%	
#3-#7 Other Containers – CRV	0.01%	0.0%	Ash	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.27%	0.1%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.27%	0.1%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	3.95%	0.9%	Treated Medical Waste	0.24%	0.4%
Durable Plastic Items	1.80%	0.9%	Bulky Items	0.00%	0.0%
Remainder/ Composite Plastic	1.63%	0.4%	Tires	0.00%	0.0%
			Remainder/ Composite Special Waste	0.00%	0.0%
Metal	3.49%		Mixed Residue	2.00%	
Tin/Steel Cans	0.61%	0.2%	Remainder/ Composite Mixed Residue	2.00%	1.3%
Major Appliances	0.00%	0.0%			
Other Ferrous	1.16%	0.9%			
Aluminum Cans – CRV	0.21%	0.1%			
Aluminum Cans – Non-CRV	0.00%	0.0%			
Other Non-Ferrous	0.40%	0.2%			
Remainder/ Composite Metal	1.10%	0.6%			
			Samples:	22	

Table 29: Rohnert Park Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	2.3%		Organics	25.01%	
Uncoated Corrugated Cardboard	0.34%	0.3%	Food	1.29%	1.8%
Paper Bags/Kraft	0.03%	0.0%	Leaves & Grass	8.23%	10.7%
Newspaper	0.27%	0.4%	Prunings & Trimmings	1.46%	2.3%
White Ledger	0.01%	0.0%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.01%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.01%	0.0%	Textiles	0.13%	0.2%
Magazines & Catalogs	0.10%	0.1%	Carpet	7.62%	7.4%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.93%	1.6%
Other Recyclable Paper	0.66%	0.7%	R/C Organics	5.34%	7.6%
Other Compostable Paper	0.11%	0.1%			
Remainder/ Composite Paper	0.77%	0.8%	Construction & Demolition	67.07%	
			Concrete	0.00%	0.0%
Glass	1.30%		Asphalt Paving	0.00%	0.0%
Clear Glass	0.17%	0.3%	Asphalt Roofing	0.30%	0.5%
Green Glass	0.07%	0.1%	Clean recyclable wood	11.44%	12.9%
Brown Glass	0.51%	0.6%	Other Recyclable Wood	1.35%	1.5%
Other Colored Glass	0.00%	0.0%	Treated Wood Waste	39.23%	36.5%
Flat Glass	0.48%	0.8%	Clean Gypsum Board	0.00%	0.0%
R/C Glass	0.07%	0.1%	Rock, Soil, & Fines	8.48%	9.2%
			R/C C&D	6.26%	6.5%
Plastic	1.31%		Hazardous & E-Waste	0.77%	
PET Bottles	0.02%	0.0%	Paint	0.00%	0.0%
Other PET Contnrs	0.00%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
HDPE Nat. Bottles	0.00%	0.0%	Used Oil & Oil Filters	0.77%	1.2%
HDPE Colored Bottles	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.03%	0.1%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.00%	0.0%	Household Batteries	0.00%	0.0%
#3-#7 Other Contnrs	0.00%	0.0%	Universal Waste	0.00%	0.0%
Recyclable Plastic Film	0.04%	0.0%	Covered Electronic Waste	0.00%	0.0%
Non-recyclable Film	0.21%	0.3%	Fluorescent Tubes	0.00%	0.0%
Durable Plastic Items	0.20%	0.2%	Other HHW	0.00%	0.0%
R/C Plastic	0.80%	1.1%	R/C Hazardous & E-waste	0.00%	0.0%
			Special Waste	1.25%	
Metal	1.00%		Ash	0.00%	0.0%
Tin/Steel Cans	0.07%	0.1%	Sewage Solids	0.00%	0.0%
Major Appliances	0.00%	0.0%	Industrial Sludge	0.00%	0.0%
Other Ferrous	0.67%	0.8%	Treated Medical Waste	0.00%	0.0%
Aluminum Cans	0.07%	0.1%	Bulky Items	1.25%	1.8%
Other Non-Ferrous	0.03%	0.0%	Tires	0.00%	0.0%
R/C Metal	0.16%	0.3%	R/C Special Waste	0.00%	0.0%
			Mixed Residue	0.00%	
			Mix Residue	0.00%	0.0%
			Samples:	13	

Table 30: Santa Rosa Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	21.6%		Organics	49.73%	
Uncoated Corrugated Cardboard	2.96%	0.7%	Food	35.60%	4.1%
Paper Bags/Kraft	0.45%	0.1%	Leaves & Grass	4.25%	2.2%
Newspaper	2.46%	0.7%	Prunings & Trimmings	0.56%	0.5%
White Ledger	0.79%	0.3%	Branches & Stumps	0.22%	0.3%
Colored Ledger	0.08%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.23%	0.3%
Other Office Paper	1.10%	0.4%	Textiles	3.03%	0.8%
Magazines & Catalogs	1.15%	0.3%	Carpet	0.24%	0.1%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	4.71%	0.8%	Remainder/ Composite Organics	5.59%	1.2%
Other Compostable Paper	6.14%	1.0%			
Remainder/ Composite Paper	1.73%	0.6%	Construction & Demolition	7.08%	
Glass	2.02%		Concrete	0.22%	0.2%
Clear Bottles & Containers – CRV	0.44%	0.2%	Asphalt Paving	0.49%	0.8%
Clear Bottles & Containers – non-CRV	0.32%	0.1%	Asphalt Roofing	0.04%	0.1%
Green Bottles & Containers – CRV	0.10%	0.0%	Clean recyclable wood (non-treated)	1.21%	0.7%
Green Bottles & Containers – Non-CRV	0.32%	0.2%	Other Untreated/ Recyclable Wood	0.38%	0.3%
Brown Bottles & Containers – CRV	0.23%	0.1%	Treated Wood Waste	1.83%	1.3%
Brown Bottles & Containers – Non-CRV	0.03%	0.0%	Clean Gypsum Board	0.25%	0.3%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	0.96%	0.8%
Other Colored Bottles & Containers – Non-CRV	0.01%	0.0%	Remainder/ Composite C&D	1.69%	0.9%
Flat Glass	0.01%	0.0%			
Remainder/ Composite Glass	0.56%	0.4%	Hazardous & E-Waste	1.54%	
Plastic	11.05%		Paint	0.11%	0.1%
PETE Bottles – CRV	0.37%	0.1%	Vehicle & Equipment Fluids	0.05%	0.1%
PETE Bottles – Non-CRV	0.20%	0.1%	Used Oil & Oil Filters	0.01%	0.0%
Other PETE Containers – CRV	0.01%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.11%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.08%	0.0%	Household Batteries	0.03%	0.0%
HDPE Natural Bottles – Non-CRV	0.15%	0.0%	Universal Waste	0.23%	0.2%
HDPE Colored Bottles – CRV	0.01%	0.0%	Covered Electronic Waste	0.10%	0.1%
HDPE Colored Bottles – Non-CRV	0.24%	0.1%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Other HHW	0.87%	0.8%
Other HDPE Containers – Non-CRV	0.19%	0.2%	Remainder/ Composite Hazardous & E-waste	0.14%	0.2%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.04%	0.0%	Special Waste	1.15%	
#3-#7 Other Containers – CRV	0.00%	0.0%	Ash	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.41%	0.1%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.38%	0.2%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	4.03%	0.5%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	1.45%	0.4%	Bulky Items	0.38%	0.5%
Remainder/ Composite Plastic	3.35%	1.9%	Tires	0.25%	0.4%
			Remainder/ Composite Special Waste	0.52%	0.8%
Metal	3.74%				
Tin/Steel Cans	0.82%	0.2%	Mixed Residue	2.13%	
Major Appliances	0.00%	0.0%	Remainder/ Composite Mixed Residue	2.13%	1.0%
Other Ferrous	1.18%	0.4%			
Aluminum Cans – CRV	0.20%	0.0%			
Aluminum Cans – Non-CRV	0.02%	0.0%			
Other Non-Ferrous	0.25%	0.1%			
Remainder/ Composite Metal	1.27%	0.6%			
			Samples:	76	

Table 31: Santa Rosa Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	6.6%		Organics	12.58%	
Uncoated Corrugated Cardboard	1.05%	0.6%	Food	0.27%	0.2%
Paper Bags/Kraft	0.13%	0.1%	Leaves & Grass	2.08%	1.7%
Newspaper	0.49%	0.3%	Prunings & Trimmings	2.32%	2.0%
White Ledger	0.01%	0.0%	Branches & Stumps	0.27%	0.3%
Colored Ledger	0.01%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.05%	0.0%	Textiles	0.91%	0.8%
Magazines & Catalogs	0.12%	0.1%	Carpet	4.81%	3.7%
Phone Books & Directories	0.01%	0.0%	Carpet Padding	1.21%	1.1%
Other Recyclable Paper	1.81%	0.8%	R/C Organics	0.72%	0.5%
Other Compostable Paper	0.33%	0.2%			
Remainder/ Composite Paper	2.56%	1.7%	Construction & Demolition	63.17%	
			Concrete	3.43%	2.2%
Glass	1.87%		Asphalt Paving	0.68%	1.1%
Clear Glass	0.30%	0.2%	Asphalt Roofing	11.22%	10.9%
Green Glass	0.26%	0.2%	Clean recyclable wood	9.18%	3.2%
Brown Glass	0.23%	0.1%	Other Recyclable Wood	5.49%	2.5%
Other Colored Glass	0.00%	0.0%	Treated Wood Waste	6.78%	3.1%
Flat Glass	0.08%	0.1%	Clean Gypsum Board	5.42%	4.5%
R/C Glass	1.00%	1.1%	Rock, Soil, & Fines	2.12%	1.3%
			R/C C&D	18.86%	7.0%
Plastic	1.24%		Hazardous & E-Waste	0.52%	
PET Bottles	0.03%	0.0%	Paint	0.00%	0.0%
Other PET Contnrs	0.01%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
HDPE Nat. Bottles	0.01%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
HDPE Colored Bottles	0.01%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.01%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.00%	0.0%	Household Batteries	0.06%	0.1%
#3-#7 Other Contnrs	0.02%	0.0%	Universal Waste	0.02%	0.0%
Recyclable Plastic Film	0.04%	0.0%	Covered Electronic Waste	0.37%	0.5%
Non-recyclable Film	0.14%	0.1%	Fluorescent Tubes	0.00%	0.0%
Durable Plastic Items	0.52%	0.3%	Other HHW	0.07%	0.1%
R/C Plastic	0.46%	0.2%	R/C Hazardous & E-waste	0.00%	0.0%
			Special Waste	5.83%	
Metal	2.13%		Ash	0.00%	0.0%
Tin/Steel Cans	0.12%	0.1%	Sewage Solids	0.00%	0.0%
Major Appliances	0.00%	0.0%	Industrial Sludge	0.00%	0.0%
Other Ferrous	1.24%	0.6%	Treated Medical Waste	0.00%	0.0%
Aluminum Cans	0.01%	0.0%	Bulky Items	5.82%	2.9%
Other Non-Ferrous	0.11%	0.1%	Tires	0.01%	0.0%
R/C Metal	0.64%	0.3%	R/C Special Waste	0.00%	0.0%
			Mixed Residue	6.08%	
			Mix Residue	6.08%	4.2%
			Samples:	59	

Table 32: Sebastopol Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	21.3%		Organics	45.25%	
Uncoated Corrugated Cardboard	1.57%	0.4%	Food	29.53%	8.9%
Paper Bags/Kraft	0.74%	0.4%	Leaves & Grass	9.58%	11.5%
Newspaper	1.81%	1.6%	Prunings & Trimmings	0.00%	0.0%
White Ledger	0.45%	0.4%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.03%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.18%	0.2%	Textiles	2.45%	1.5%
Magazines & Catalogs	1.13%	1.0%	Carpet	0.15%	0.2%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	4.24%	1.7%	Remainder/ Composite Organics	3.54%	1.7%
Other Compostable Paper	5.27%	2.9%			
Remainder/ Composite Paper	5.82%	7.4%	Construction & Demolition	18.20%	
Glass	1.16%		Concrete	0.00%	0.0%
Clear Bottles & Containers – CRV	0.58%	0.5%	Asphalt Paving	0.00%	0.0%
Clear Bottles & Containers – non-CRV	0.06%	0.1%	Asphalt Roofing	0.04%	0.1%
Green Bottles & Containers – CRV	0.31%	0.4%	Clean recyclable wood (non-treated)	2.80%	2.9%
Green Bottles & Containers – Non-CRV	0.00%	0.0%	Other Untreated/ Recyclable Wood	0.06%	0.1%
Brown Bottles & Containers – CRV	0.20%	0.2%	Treated Wood Waste	2.00%	0.9%
Brown Bottles & Containers – Non-CRV	0.00%	0.0%	Clean Gypsum Board	0.00%	0.0%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	11.43%	10.5%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Remainder/ Composite C&D	1.88%	2.8%
Flat Glass	0.00%	0.0%			
Remainder/ Composite Glass	0.01%	0.0%	Hazardous & E-Waste	1.49%	
Plastic	5.80%		Paint	0.00%	0.0%
PETE Bottles – CRV	0.36%	0.1%	Vehicle & Equipment Fluids	0.00%	0.0%
PETE Bottles – Non-CRV	0.11%	0.1%	Used Oil & Oil Filters	0.00%	0.0%
Other PETE Containers – CRV	0.01%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.05%	0.1%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.05%	0.1%	Household Batteries	0.01%	0.0%
HDPE Natural Bottles – Non-CRV	0.20%	0.1%	Universal Waste	0.60%	1.0%
HDPE Colored Bottles – CRV	0.07%	0.1%	Covered Electronic Waste	0.81%	0.8%
HDPE Colored Bottles – Non-CRV	0.09%	0.0%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Other HHW	0.07%	0.1%
Other HDPE Containers – Non-CRV	0.03%	0.0%	Remainder/ Composite Hazardous & E-waste	0.00%	0.0%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.06%	0.1%	Special Waste	0.22%	
#3-#7 Other Containers – CRV	0.00%	0.0%	Ash	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.51%	0.3%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.06%	0.0%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	3.00%	1.0%	Treated Medical Waste	0.22%	0.4%
Durable Plastic Items	0.39%	0.2%	Bulky Items	0.00%	0.0%
Remainder/ Composite Plastic	0.81%	0.3%	Tires	0.00%	0.0%
			Remainder/ Composite Special Waste	0.00%	0.0%
Metal	3.48%		Mixed Residue	3.15%	
Tin/Steel Cans	0.48%	0.2%	Remainder/ Composite Mixed Residue	3.15%	4.5%
Major Appliances	0.00%	0.0%			
Other Ferrous	2.37%	3.0%			
Aluminum Cans – CRV	0.13%	0.1%			
Aluminum Cans – Non-CRV	0.12%	0.2%			
Other Non-Ferrous	0.18%	0.1%			
Remainder/ Composite Metal	0.19%	0.2%			
			Samples:	6	

Table 33: Sebastopol Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	17.6%		Organics	15.86%	
Uncoated Corrugated Cardboard	3.12%	2.2%	Food	2.80%	2.0%
Paper Bags/Kraft	0.37%	0.4%	Leaves & Grass	3.95%	2.2%
Newspaper	2.41%	1.9%	Prunings & Trimmings	3.36%	3.3%
White Ledger	0.13%	0.1%	Branches & Stumps	2.00%	3.0%
Colored Ledger	0.04%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.24%	0.2%	Textiles	0.33%	0.3%
Magazines & Catalogs	1.27%	1.5%	Carpet	0.76%	0.8%
Phone Books & Directories	0.02%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	4.28%	1.9%	R/C Organics	2.64%	2.5%
Other Compostable Paper	1.57%	0.8%			
Remainder/ Composite Paper	4.14%	2.4%	Construction & Demolition	43.44%	
Glass	14.71%		Concrete	3.13%	3.2%
Clear Glass	0.67%	0.6%	Asphalt Paving	3.78%	6.3%
Green Glass	1.04%	1.1%	Asphalt Roofing	0.59%	0.9%
Brown Glass	0.95%	0.7%	Clean recyclable wood	5.93%	2.9%
Other Colored Glass	0.00%	0.0%	Other Recyclable Wood	4.41%	3.2%
Flat Glass	1.35%	2.0%	Treated Wood Waste	5.50%	4.2%
R/C Glass	10.71%	9.4%	Clean Gypsum Board	4.80%	4.9%
Plastic	1.51%		Rock, Soil, & Fines	6.22%	4.1%
PET Bottles	0.11%	0.1%	R/C C&D	9.09%	4.4%
Other PET Contnrs	0.02%	0.0%	Hazardous & E-Waste	0.34%	
HDPE Nat. Bottles	0.03%	0.0%	Paint	0.07%	0.1%
HDPE Colored Bottles	0.03%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
Other HDPE Contnrs	0.02%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
#3-#7 Bottles	0.01%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
#3-#7 Other Contnrs	0.05%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
Recyclable Plastic Film	0.11%	0.1%	Household Batteries	0.11%	0.2%
Non-recyclable Film	0.23%	0.2%	Universal Waste	0.00%	0.0%
Durable Plastic Items	0.36%	0.2%	Covered Electronic Waste	0.17%	0.2%
R/C Plastic	0.54%	0.4%	Fluorescent Tubes	0.00%	0.0%
Metal	2.50%		Other HHW	0.00%	0.0%
Tin/Steel Cans	0.60%	0.5%	R/C Hazardous & E-waste	0.00%	0.0%
Major Appliances	0.00%	0.0%	Special Waste	0.26%	
Other Ferrous	1.17%	0.7%	Ash	0.00%	0.0%
Aluminum Cans	0.06%	0.0%	Sewage Solids	0.00%	0.0%
Other Non-Ferrous	0.23%	0.3%	Industrial Sludge	0.00%	0.0%
R/C Metal	0.45%	0.3%	Treated Medical Waste	0.00%	0.0%
			Bulky Items	0.26%	0.3%
			Tires	0.00%	0.0%
			R/C Special Waste	0.00%	0.0%
			Mixed Residue	3.77%	
			Mix Residue	3.77%	4.6%
			Samples:	19	

Table 34: Sonoma Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	19.2%		Organics	48.37%	
Uncoated Corrugated Cardboard	1.64%	0.4%	Food	30.19%	5.3%
Paper Bags/Kraft	0.58%	0.2%	Leaves & Grass	3.55%	2.2%
Newspaper	2.41%	0.8%	Prunings & Trimmings	4.48%	4.4%
White Ledger	0.43%	0.2%	Branches & Stumps	0.37%	0.4%
Colored Ledger	0.23%	0.4%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.05%	0.1%
Other Office Paper	0.97%	0.6%	Textiles	3.00%	1.1%
Magazines & Catalogs	1.38%	0.6%	Carpet	0.26%	0.3%
Phone Books & Directories	0.19%	0.2%	Carpet Padding	0.03%	0.1%
Other Recyclable Paper	3.51%	0.8%	Remainder/ Composite Organics	6.43%	2.9%
Other Compostable Paper	6.43%	1.5%			
Remainder/ Composite Paper	1.41%	0.7%	Construction & Demolition	12.38%	
Glass	2.61%		Concrete	0.12%	0.2%
Clear Bottles & Containers – CRV	0.65%	0.3%	Asphalt Paving	0.06%	0.1%
Clear Bottles & Containers – non-CRV	0.55%	0.2%	Asphalt Roofing	0.28%	0.3%
Green Bottles & Containers – CRV	0.24%	0.2%	Clean recyclable wood (non-treated)	1.41%	1.1%
Green Bottles & Containers – Non-CRV	0.97%	0.7%	Other Untreated/ Recyclable Wood	0.70%	0.5%
Brown Bottles & Containers – CRV	0.14%	0.1%	Treated Wood Waste	2.09%	1.6%
Brown Bottles & Containers – Non-CRV	0.01%	0.0%	Clean Gypsum Board	0.72%	1.2%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	2.95%	1.8%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Remainder/ Composite C&D	4.06%	2.8%
Flat Glass	0.01%	0.0%			
Remainder/ Composite Glass	0.06%	0.0%	Hazardous & E-Waste	1.35%	
Plastic	8.52%		Paint	0.45%	0.5%
PETE Bottles – CRV	0.33%	0.1%	Vehicle & Equipment Fluids	0.00%	0.0%
PETE Bottles – Non-CRV	0.14%	0.0%	Used Oil & Oil Filters	0.05%	0.1%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.12%	0.1%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.05%	0.0%	Household Batteries	0.02%	0.0%
HDPE Natural Bottles – Non-CRV	0.10%	0.0%	Universal Waste	0.32%	0.3%
HDPE Colored Bottles – CRV	0.01%	0.0%	Covered Electronic Waste	0.38%	0.6%
HDPE Colored Bottles – Non-CRV	0.24%	0.1%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Other HHW	0.12%	0.2%
Other HDPE Containers – Non-CRV	0.06%	0.1%	Remainder/ Composite Hazardous & E-waste	0.01%	0.0%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.04%	0.0%	Special Waste	0.18%	
#3-#7 Other Containers – CRV	0.00%	0.0%	Ash	0.14%	0.2%
#3-#7 Other Containers – Non-CRV	0.37%	0.1%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.19%	0.1%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	3.56%	0.6%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	1.88%	1.6%	Bulky Items	0.00%	0.0%
Remainder/ Composite Plastic	1.42%	0.4%	Tires	0.04%	0.1%
			Remainder/ Composite Special Waste	0.00%	0.0%
Metal	4.25%		Mixed Residue	3.17%	
Tin/Steel Cans	0.47%	0.1%	Remainder/ Composite Mixed Residue	3.17%	1.5%
Major Appliances	0.00%	0.0%			
Other Ferrous	2.27%	1.3%			
Aluminum Cans – CRV	0.18%	0.1%	Samples:	32	
Aluminum Cans – Non-CRV	0.04%	0.0%			
Other Non-Ferrous	0.38%	0.4%			
Remainder/ Composite Metal	0.92%	0.9%			

Table 35: Sonoma Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	8.3%		Organics	22.52%	
Uncoated Corrugated Cardboard	1.88%	1.4%	Food	0.31%	0.3%
Paper Bags/Kraft	0.24%	0.2%	Leaves & Grass	10.87%	5.6%
Newspaper	1.00%	1.0%	Prunings & Trimmings	6.08%	3.4%
White Ledger	0.04%	0.0%	Branches & Stumps	1.38%	1.8%
Colored Ledger	0.03%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	1.53%	2.5%
Other Office Paper	0.06%	0.1%	Textiles	0.86%	0.5%
Magazines & Catalogs	0.22%	0.1%	Carpet	1.15%	0.7%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.19%	0.1%
Other Recyclable Paper	1.93%	1.0%	R/C Organics	0.15%	0.1%
Other Compostable Paper	0.56%	0.4%			
Remainder/ Composite Paper	2.32%	1.3%	Construction & Demolition	57.72%	
			Concrete	1.00%	0.7%
Glass	2.03%		Asphalt Paving	0.00%	0.0%
Clear Glass	0.42%	0.4%	Asphalt Roofing	6.11%	3.7%
Green Glass	0.31%	0.3%	Clean recyclable wood	8.90%	4.0%
Brown Glass	0.23%	0.3%	Other Recyclable Wood	1.87%	1.3%
Other Colored Glass	0.03%	0.0%	Treated Wood Waste	17.00%	7.1%
Flat Glass	0.14%	0.1%	Clean Gypsum Board	0.81%	0.8%
R/C Glass	0.91%	0.7%	Rock, Soil, & Fines	2.97%	2.0%
			R/C C&D	19.05%	11.0%
Plastic	1.68%		Hazardous & E-Waste	0.95%	
PET Bottles	0.04%	0.0%	Paint	0.74%	1.0%
Other PET Contnrs	0.00%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
HDPE Nat. Bottles	0.01%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
HDPE Colored Bottles	0.02%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.07%	0.1%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.00%	0.0%	Household Batteries	0.00%	0.0%
#3-#7 Other Contnrs	0.03%	0.0%	Universal Waste	0.00%	0.0%
Recyclable Plastic Film	0.06%	0.1%	Covered Electronic Waste	0.07%	0.1%
Non-recyclable Film	0.24%	0.1%	Fluorescent Tubes	0.00%	0.0%
Durable Plastic Items	0.73%	0.4%	Other HHW	0.14%	0.2%
R/C Plastic	0.49%	0.3%	R/C Hazardous & E-waste	0.00%	0.0%
			Special Waste	1.11%	
Metal	2.77%		Ash	0.00%	0.0%
Tin/Steel Cans	0.27%	0.3%	Sewage Solids	0.00%	0.0%
Major Appliances	0.00%	0.0%	Industrial Sludge	0.00%	0.0%
Other Ferrous	1.09%	0.7%	Treated Medical Waste	0.08%	0.1%
Aluminum Cans	0.04%	0.0%	Bulky Items	0.96%	0.8%
Other Non-Ferrous	0.61%	0.5%	Tires	0.07%	0.1%
R/C Metal	0.76%	0.5%	R/C Special Waste	0.00%	0.0%
			Mixed Residue	2.94%	
			Mix Residue	2.94%	2.0%
			Samples:	66	

Table 36: Town of Windsor Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	15.2%		Organics	43.78%	
Uncoated Corrugated Cardboard	1.15%	0.5%	Food	26.30%	5.8%
Paper Bags/Kraft	0.25%	0.1%	Leaves & Grass	4.88%	2.9%
Newspaper	1.27%	0.5%	Prunings & Trimmings	0.22%	0.2%
White Ledger	0.86%	0.8%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.11%	0.1%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.86%	0.4%	Textiles	3.49%	1.5%
Magazines & Catalogs	0.60%	0.4%	Carpet	0.35%	0.3%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.01%	0.0%
Other Recyclable Paper	2.79%	0.9%	Remainder/ Composite Organics	8.52%	3.4%
Other Compostable Paper	6.30%	1.8%			
Remainder/ Composite Paper	1.03%	0.5%	Construction & Demolition	19.37%	
Glass	1.42%		Concrete	4.51%	4.4%
Clear Bottles & Containers – CRV	0.56%	0.3%	Asphalt Paving	0.04%	0.1%
Clear Bottles & Containers – non-CRV	0.35%	0.2%	Asphalt Roofing	1.46%	2.4%
Green Bottles & Containers – CRV	0.11%	0.1%	Clean recyclable wood (non-treated)	4.37%	5.7%
Green Bottles & Containers – Non-CRV	0.09%	0.1%	Other Untreated/ Recyclable Wood	1.04%	1.1%
Brown Bottles & Containers – CRV	0.17%	0.1%	Treated Wood Waste	1.67%	1.1%
Brown Bottles & Containers – Non-CRV	0.01%	0.0%	Clean Gypsum Board	0.06%	0.1%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	4.08%	3.1%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Remainder/ Composite C&D	2.14%	1.9%
Flat Glass	0.00%	0.0%			
Remainder/ Composite Glass	0.12%	0.1%	Hazardous & E-Waste	1.95%	
Plastic	8.62%		Paint	0.03%	0.0%
PETE Bottles – CRV	0.36%	0.1%	Vehicle & Equipment Fluids	0.00%	0.0%
PETE Bottles – Non-CRV	0.13%	0.1%	Used Oil & Oil Filters	0.02%	0.0%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.11%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.03%	0.0%	Household Batteries	0.06%	0.1%
HDPE Natural Bottles – Non-CRV	0.09%	0.0%	Universal Waste	0.93%	1.1%
HDPE Colored Bottles – CRV	0.03%	0.0%	Covered Electronic Waste	0.91%	0.9%
HDPE Colored Bottles – Non-CRV	0.21%	0.1%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.10%	0.1%	Other HHW	0.00%	0.0%
Other HDPE Containers – Non-CRV	0.27%	0.2%	Remainder/ Composite Hazardous & E-waste	0.00%	0.0%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.06%	0.0%	Special Waste	1.21%	
#3-#7 Other Containers – CRV	0.01%	0.0%	Ash	0.42%	0.7%
#3-#7 Other Containers – Non-CRV	0.31%	0.1%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.20%	0.1%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	3.87%	0.9%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	1.06%	0.4%	Bulky Items	0.63%	1.0%
Remainder/ Composite Plastic	1.78%	0.8%	Tires	0.15%	0.2%
			Remainder/ Composite Special Waste	0.00%	0.0%
Metal	5.37%				
Tin/Steel Cans	0.46%	0.1%	Mixed Residue	3.06%	
Major Appliances	0.00%	0.0%	Remainder/ Composite Mixed Residue	3.06%	1.9%
Other Ferrous	2.03%	1.1%			
Aluminum Cans – CRV	0.15%	0.1%			
Aluminum Cans – Non-CRV	0.00%	0.0%			
Other Non-Ferrous	0.22%	0.1%			
Remainder/ Composite Metal	2.51%	1.7%			
			Samples:	24	

Table 37: Town of Windsor Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	3.5%		Organics	6.00%	
Uncoated Corrugated Cardboard	0.71%	0.6%	Food	0.37%	0.5%
Paper Bags/Kraft	0.02%	0.0%	Leaves & Grass	0.11%	0.2%
Newspaper	0.42%	0.5%	Prunings & Trimmings	3.03%	2.8%
White Ledger	0.02%	0.0%	Branches & Stumps	0.06%	0.1%
Colored Ledger	0.01%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.02%	0.0%	Textiles	2.13%	3.4%
Magazines & Catalogs	0.12%	0.1%	Carpet	0.11%	0.2%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	1.33%	1.2%	R/C Organics	0.20%	0.2%
Other Compostable Paper	0.30%	0.3%			
Remainder/ Composite Paper	0.53%	0.5%	Construction & Demolition	76.71%	
Glass	6.76%		Concrete	8.09%	12.3%
Clear Glass	0.17%	0.2%	Asphalt Paving	0.00%	0.0%
Green Glass	0.09%	0.1%	Asphalt Roofing	0.00%	0.0%
Brown Glass	0.13%	0.2%	Clean recyclable wood	26.49%	12.0%
Other Colored Glass	0.00%	0.0%	Other Recyclable Wood	4.64%	2.6%
Flat Glass	1.87%	2.2%	Treated Wood Waste	16.76%	12.6%
R/C Glass	4.50%	4.8%	Clean Gypsum Board	2.77%	2.5%
Plastic	1.41%		Rock, Soil, & Fines	2.58%	2.8%
PET Bottles	0.03%	0.0%	R/C C&D	15.39%	13.5%
Other PET Contnrs	0.00%	0.0%	Hazardous & E-Waste	0.00%	
HDPE Nat. Bottles	0.00%	0.0%	Paint	0.00%	0.0%
HDPE Colored Bottles	0.00%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
Other HDPE Contnrs	0.02%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
#3-#7 Bottles	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
#3-#7 Other Contnrs	0.01%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
Recyclable Plastic Film	0.01%	0.0%	Household Batteries	0.00%	0.0%
Non-recyclable Film	0.06%	0.0%	Universal Waste	0.00%	0.0%
Durable Plastic Items	0.51%	0.5%	Covered Electronic Waste	0.00%	0.0%
R/C Plastic	0.76%	0.9%	Fluorescent Tubes	0.00%	0.0%
Metal	2.93%		Other HHW	0.00%	0.0%
Tin/Steel Cans	0.02%	0.0%	R/C Hazardous & E-waste	0.00%	0.0%
Major Appliances	0.00%	0.0%	Special Waste	0.50%	
Other Ferrous	2.26%	1.5%	Ash	0.00%	0.0%
Aluminum Cans	0.00%	0.0%	Sewage Solids	0.00%	0.0%
Other Non-Ferrous	0.21%	0.3%	Industrial Sludge	0.00%	0.0%
R/C Metal	0.43%	0.4%	Treated Medical Waste	0.00%	0.0%
			Bulky Items	0.50%	0.7%
			Tires	0.00%	0.0%
			R/C Special Waste	0.00%	0.0%
			Mixed Residue	2.24%	
			Mix Residue	2.24%	3.4%
			Samples:	15	

Table 38: Unincorporated Sonoma County Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	19.6%		Organics	42.24%	
Uncoated Corrugated Cardboard	3.17%	1.5%	Food	24.67%	5.3%
Paper Bags/Kraft	0.48%	0.2%	Leaves & Grass	4.56%	3.7%
Newspaper	2.21%	1.1%	Prunings & Trimmings	1.09%	1.3%
White Ledger	0.32%	0.2%	Branches & Stumps	1.40%	2.3%
Colored Ledger	0.05%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.28%	0.3%
Other Office Paper	0.19%	0.1%	Textiles	5.26%	1.8%
Magazines & Catalogs	0.84%	0.4%	Carpet	0.91%	0.7%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	3.57%	1.1%	Remainder/ Composite Organics	4.07%	1.5%
Other Compostable Paper	7.22%	2.4%			
Remainder/ Composite Paper	1.58%	0.8%	Construction & Demolition	11.98%	
Glass	3.31%		Concrete	0.04%	0.1%
Clear Bottles & Containers – CRV	1.37%	0.8%	Asphalt Paving	0.49%	0.8%
Clear Bottles & Containers – non-CRV	0.56%	0.3%	Asphalt Roofing	0.00%	0.0%
Green Bottles & Containers – CRV	0.14%	0.1%	Clean recyclable wood (non-treated)	1.76%	1.1%
Green Bottles & Containers – Non-CRV	0.29%	0.2%	Other Untreated/ Recyclable Wood	0.83%	0.8%
Brown Bottles & Containers – CRV	0.61%	0.4%	Treated Wood Waste	0.99%	0.9%
Brown Bottles & Containers – Non-CRV	0.02%	0.0%	Clean Gypsum Board	0.13%	0.1%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	6.49%	6.0%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Remainder/ Composite C&D	1.24%	0.9%
Flat Glass	0.00%	0.0%			
Remainder/ Composite Glass	0.31%	0.2%	Hazardous & E-Waste	2.60%	
Plastic	9.91%		Paint	1.76%	2.9%
PETE Bottles – CRV	0.39%	0.1%	Vehicle & Equipment Fluids	0.00%	0.0%
PETE Bottles – Non-CRV	0.15%	0.1%	Used Oil & Oil Filters	0.00%	0.0%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.09%	0.1%	Small Rechargeable Batteries	0.11%	0.2%
HDPE Natural Bottles – CRV	0.11%	0.1%	Household Batteries	0.03%	0.0%
HDPE Natural Bottles – Non-CRV	0.17%	0.1%	Universal Waste	0.03%	0.0%
HDPE Colored Bottles – CRV	0.01%	0.0%	Covered Electronic Waste	0.21%	0.3%
HDPE Colored Bottles – Non-CRV	0.25%	0.1%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.00%	0.0%	Other HHW	0.46%	0.7%
Other HDPE Containers – Non-CRV	0.19%	0.1%	Remainder/ Composite Hazardous & E-waste	0.00%	0.0%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.02%	0.0%	Special Waste	1.87%	
#3-#7 Other Containers – CRV	0.00%	0.0%	Ash	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.34%	0.1%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.65%	0.5%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	4.82%	3.2%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	1.17%	0.6%	Bulky Items	0.00%	0.0%
Remainder/ Composite Plastic	1.56%	0.8%	Tires	1.59%	2.5%
			Remainder/ Composite Special Waste	0.27%	0.4%
Metal	3.43%				
Tin/Steel Cans	0.56%	0.3%	Mixed Residue	5.03%	
Major Appliances	0.00%	0.0%	Remainder/ Composite Mixed Residue	5.03%	3.3%
Other Ferrous	1.92%	2.0%			
Aluminum Cans – CRV	0.19%	0.1%			
Aluminum Cans – Non-CRV	0.05%	0.1%			
Other Non-Ferrous	0.16%	0.1%			
Remainder/ Composite Metal	0.55%	0.3%			
			Samples:	18	

Table 39: Unincorporated Sonoma County Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	7.2%		Organics	15.18%	
Uncoated Corrugated Cardboard	0.96%	0.4%	Food	2.53%	2.0%
Paper Bags/Kraft	0.04%	0.0%	Leaves & Grass	3.98%	2.2%
Newspaper	0.39%	0.3%	Prunings & Trimmings	0.38%	0.3%
White Ledger	0.02%	0.0%	Branches & Stumps	0.37%	0.6%
Colored Ledger	0.01%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.07%	0.1%	Textiles	0.96%	0.6%
Magazines & Catalogs	0.28%	0.2%	Carpet	4.65%	4.5%
Phone Books & Directories	0.06%	0.1%	Carpet Padding	0.91%	0.9%
Other Recyclable Paper	3.35%	2.6%	R/C Organics	1.39%	1.3%
Other Compostable Paper	0.45%	0.2%			
Remainder/ Composite Paper	1.54%	0.8%	Construction & Demolition	59.77%	
			Concrete	1.70%	2.2%
Glass	1.70%		Asphalt Paving	0.00%	0.0%
Clear Glass	0.48%	0.4%	Asphalt Roofing	9.85%	8.3%
Green Glass	0.30%	0.3%	Clean recyclable wood	13.21%	7.9%
Brown Glass	0.54%	0.5%	Other Recyclable Wood	2.84%	1.8%
Other Colored Glass	0.00%	0.0%	Treated Wood Waste	10.21%	5.3%
Flat Glass	0.28%	0.3%	Clean Gypsum Board	0.93%	0.9%
R/C Glass	0.09%	0.1%	Rock, Soil, & Fines	3.87%	4.3%
			R/C C&D	17.15%	8.1%
Plastic	2.78%		Hazardous & E-Waste	0.78%	
PET Bottles	0.07%	0.0%	Paint	0.00%	0.0%
Other PET Contnrs	0.06%	0.1%	Vehicle & Equipment Fluids	0.00%	0.0%
HDPE Nat. Bottles	0.01%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
HDPE Colored Bottles	0.02%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.18%	0.2%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.01%	0.0%	Household Batteries	0.53%	0.5%
#3-#7 Other Contnrs	0.37%	0.6%	Universal Waste	0.10%	0.1%
Recyclable Plastic Film	0.03%	0.0%	Covered Electronic Waste	0.10%	0.2%
Non-recyclable Film	0.32%	0.2%	Fluorescent Tubes	0.01%	0.0%
Durable Plastic Items	1.38%	0.9%	Other HHW	0.04%	0.1%
R/C Plastic	0.33%	0.2%	R/C Hazardous & E-waste	0.00%	0.0%
			Special Waste	3.47%	
Metal	7.41%		Ash	0.00%	0.0%
Tin/Steel Cans	0.16%	0.1%	Sewage Solids	0.00%	0.0%
Major Appliances	0.00%	0.0%	Industrial Sludge	0.00%	0.0%
Other Ferrous	2.05%	1.6%	Treated Medical Waste	0.00%	0.0%
Aluminum Cans	0.10%	0.1%	Bulky Items	3.35%	2.8%
Other Non-Ferrous	4.85%	6.3%	Tires	0.12%	0.1%
R/C Metal	0.25%	0.2%	R/C Special Waste	0.00%	0.0%
			Mixed Residue	1.73%	
			Mix Residue	1.73%	2.2%
			Samples:	35	

Table 40: Unknown Jurisdictions Waste Characterization: Commercially Collected Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	12.8%		Organics	33.35%	
Uncoated Corrugated Cardboard	1.07%	0.7%	Food	19.25%	20.5%
Paper Bags/Kraft	0.33%	0.3%	Leaves & Grass	0.84%	0.8%
Newspaper	0.81%	1.1%	Prunings & Trimmings	0.00%	0.0%
White Ledger	0.00%	0.0%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.02%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.10%	0.2%	Textiles	1.09%	0.6%
Magazines & Catalogs	0.76%	1.2%	Carpet	7.91%	12.9%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	1.70%	2.8%
Other Recyclable Paper	4.57%	3.1%	Remainder/ Composite Organics	2.56%	2.7%
Other Compostable Paper	4.85%	3.3%			
Remainder/ Composite Paper	0.24%	0.3%	Construction & Demolition	33.70%	
Glass	1.51%		Concrete	1.80%	3.0%
Clear Bottles & Containers – CRV	0.41%	0.5%	Asphalt Paving	0.00%	0.0%
Clear Bottles & Containers – non-CRV	0.09%	0.2%	Asphalt Roofing	0.02%	0.0%
Green Bottles & Containers – CRV	0.00%	0.0%	Clean recyclable wood (non-treated)	14.39%	13.0%
Green Bottles & Containers – Non-CRV	0.15%	0.2%	Other Untreated/ Recyclable Wood	0.18%	0.3%
Brown Bottles & Containers – CRV	0.23%	0.2%	Treated Wood Waste	2.38%	3.6%
Brown Bottles & Containers – Non-CRV	0.00%	0.0%	Clean Gypsum Board	3.72%	5.7%
Other Colored Bottles & Containers – CRV	0.00%	0.0%	Rock, Soil, & Fines	1.97%	3.3%
Other Colored Bottles & Containers – Non-CRV	0.00%	0.0%	Remainder/ Composite C&D	9.24%	9.4%
Flat Glass	0.00%	0.0%			
Remainder/ Composite Glass	0.63%	0.9%	Hazardous & E-Waste	0.02%	
Plastic	3.93%		Paint	0.00%	0.0%
PETE Bottles – CRV	0.27%	0.3%	Vehicle & Equipment Fluids	0.00%	0.0%
PETE Bottles – Non-CRV	0.12%	0.1%	Used Oil & Oil Filters	0.00%	0.0%
Other PETE Containers – CRV	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other PETE Containers – Non-CRV	0.00%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
HDPE Natural Bottles – CRV	0.10%	0.1%	Household Batteries	0.02%	0.0%
HDPE Natural Bottles – Non-CRV	0.00%	0.0%	Universal Waste	0.00%	0.0%
HDPE Colored Bottles – CRV	0.00%	0.0%	Covered Electronic Waste	0.00%	0.0%
HDPE Colored Bottles – Non-CRV	0.01%	0.0%	Fluorescent Tubes	0.00%	0.0%
Other HDPE Containers – CRV	0.06%	0.1%	Other HHW	0.00%	0.0%
Other HDPE Containers – Non-CRV	0.01%	0.0%	Remainder/ Composite Hazardous & E-waste	0.00%	0.0%
#3-#7 Bottles – CRV	0.00%	0.0%			
#3-#7 Bottles – Non-CRV	0.06%	0.1%	Special Waste	8.23%	
#3-#7 Other Containers – CRV	0.02%	0.0%	Ash	0.00%	0.0%
#3-#7 Other Containers – Non-CRV	0.15%	0.3%	Sewage Solids	0.00%	0.0%
Recyclable Plastic Film	0.43%	0.6%	Industrial Sludge	0.00%	0.0%
Non-recyclable Film	1.78%	2.0%	Treated Medical Waste	0.00%	0.0%
Durable Plastic Items	0.29%	0.2%	Bulky Items	8.23%	12.6%
Remainder/ Composite Plastic	0.61%	0.7%	Tires	0.00%	0.0%
			Remainder/ Composite Special Waste	0.00%	0.0%
Metal	4.69%				
Tin/Steel Cans	0.53%	0.6%	Mixed Residue	1.79%	
Major Appliances	0.00%	0.0%	Remainder/ Composite Mixed Residue	1.79%	1.9%
Other Ferrous	2.82%	1.9%			
Aluminum Cans – CRV	0.13%	0.2%			
Aluminum Cans – Non-CRV	0.00%	0.0%			
Other Non-Ferrous	0.16%	0.2%			
Remainder/ Composite Metal	1.05%	1.2%			
			Samples:	4	

Table 41: Unknown Jurisdictions Waste Characterization: Self-hauled Waste

	Est. Mean	+/-		Est. Mean	+/-
Paper	3.5%		Organics	0.00%	
Uncoated Corrugated Cardboard	1.43%	1.4%	Food	0.00%	0.0%
Paper Bags/Kraft	0.13%	0.1%	Leaves & Grass	0.00%	0.0%
Newspaper	0.15%	0.3%	Prunings & Trimmings	0.00%	0.0%
White Ledger	0.00%	0.0%	Branches & Stumps	0.00%	0.0%
Colored Ledger	0.00%	0.0%	Agricultural Crop Residues	0.00%	0.0%
Computer Paper	0.00%	0.0%	Manures	0.00%	0.0%
Other Office Paper	0.00%	0.0%	Textiles	0.00%	0.0%
Magazines & Catalogs	0.00%	0.0%	Carpet	0.00%	0.0%
Phone Books & Directories	0.00%	0.0%	Carpet Padding	0.00%	0.0%
Other Recyclable Paper	1.55%	2.4%	R/C Organics	0.00%	0.0%
Other Compostable Paper	0.09%	0.2%			
Remainder/ Composite Paper	0.15%	0.2%	Construction & Demolition	89.82%	
			Concrete	0.00%	0.0%
Glass	0.00%		Asphalt Paving	0.00%	0.0%
Clear Glass	0.00%	0.0%	Asphalt Roofing	22.44%	25.4%
Green Glass	0.00%	0.0%	Clean recyclable wood	13.55%	8.8%
Brown Glass	0.00%	0.0%	Other Recyclable Wood	14.30%	21.4%
Other Colored Glass	0.00%	0.0%	Treated Wood Waste	5.40%	5.3%
Flat Glass	0.00%	0.0%	Clean Gypsum Board	4.92%	8.7%
R/C Glass	0.00%	0.0%	Rock, Soil, & Fines	1.18%	2.2%
			R/C C&D	28.03%	28.5%
Plastic	0.35%		Hazardous & E-Waste	0.00%	
PET Bottles	0.00%	0.0%	Paint	0.00%	0.0%
Other PET Contnrs	0.00%	0.0%	Vehicle & Equipment Fluids	0.00%	0.0%
HDPE Nat. Bottles	0.03%	0.0%	Used Oil & Oil Filters	0.00%	0.0%
HDPE Colored Bottles	0.00%	0.0%	Large Rechargeable Batteries	0.00%	0.0%
Other HDPE Contnrs	0.00%	0.0%	Small Rechargeable Batteries	0.00%	0.0%
#3-#7 Bottles	0.00%	0.0%	Household Batteries	0.00%	0.0%
#3-#7 Other Contnrs	0.01%	0.0%	Universal Waste	0.00%	0.0%
Recyclable Plastic Film	0.23%	0.3%	Covered Electronic Waste	0.00%	0.0%
Non-recyclable Film	0.02%	0.0%	Fluorescent Tubes	0.00%	0.0%
Durable Plastic Items	0.07%	0.1%	Other HHW	0.00%	0.0%
R/C Plastic	0.00%	0.0%	R/C Hazardous & E-waste	0.00%	0.0%
			Special Waste	4.94%	
Metal	1.40%		Ash	0.00%	0.0%
Tin/Steel Cans	0.00%	0.0%	Sewage Solids	0.00%	0.0%
Major Appliances	0.00%	0.0%	Industrial Sludge	0.00%	0.0%
Other Ferrous	1.11%	1.3%	Treated Medical Waste	0.00%	0.0%
Aluminum Cans	0.00%	0.0%	Bulky Items	4.94%	7.2%
Other Non-Ferrous	0.27%	0.4%	Tires	0.00%	0.0%
R/C Metal	0.02%	0.0%	R/C Special Waste	0.00%	0.0%
			Mixed Residue	0.00%	
			Mix Residue	0.00%	0.0%
			Samples:	8	