2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California

CalRecycle

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- San Francisco Solid Waste Transfer and Recycling Center. San Francisco, CA
- Zanker Road Landfill, San Jose, CA
- Hawthorne St. Transfer Station, Eureka, CA
- Lovelace Transfer Station, Manteca, CA
- Landers Sanitary Landfill, Landers, CA
- Golden Bear Waste Recycling Center, Richmond, CA
- Sun St. Transfer Station, Salinas, CA
- Paloma Transfer Station, Paloma, CA
- Chiquita Canyon Sanitary Landfill, Castaic, CA
- KWRA Material Recovery Facility, Hanford, CA
- Potrero Hills Landfill, Suisun City, CA
- Monterey Peninsula Landfill, Monterey, CA
- Pinecrest Transfer Station, Pinecrest, CA
- West Miramar Sanitary Landfill, San Diego, CA
- City of Clovis Landfill, Fresno, CA
- Central Transfer Station, Petaluma, CA
- MarBorg C&D Recycling & Transfer Facility, Santa Barbara, CA
- Calabasas Sanitary Landfill Agoura Hills, CA
- City of Redding Transfer Station/MRF, Redding, CA

The cooperation of the businesses and venues that participated in this study is very much appreciated. They unselfishly volunteered their time and resources to assist us with this project.

Executive Summary

Summary of Objectives

In 2011, California set an ambitious goal of 75 percent recycling, composting, or source reduction of solid waste by 2020. In 2006, California set ambitious goals to reduce greenhouse gas emissions. Directing waste materials that are generated in the state away from disposal and back into the economic stream, to their best and highest use, helps reach these goals. Businesses in California have diverted waste in many ways for many years and will continue to play a critical role in reaching these goals. The objective of this waste characterization project was to provide a better understanding of how discarded materials are generated, disposed, and diverted by the commercial sector, both for individual industry groups and for the commercial sector as a whole. This can help businesses, local governments, and CalRecycle better direct efforts to increase diversion and reduce disposal.

The California Department of Resources Recycling and Recovery (CalRecycle) commissioned this project to conduct an in-depth study of waste generated by California businesses. The objectives of the project were:

- To quantify what materials are generated and in what amounts. This includes all discards—both those disposed and those diverted from disposal.
- To characterize the sources of materials and to determine what materials are generated by different types of businesses, since they generate them in different ways (for example, compare restaurants to banks).
- To identify the paths or streams the discarded materials take, whether they are placed in disposal bins, recycling bins, or organics bins, or diverted though other means (such as a manufacturer selling scrap metal).

This study was accomplished by characterizing and quantifying disposal and diversion from individual commercial and multi-family generators statewide. CalRecycle conducted similar generator studies as part of the *1999 Statewide Waste Characterization Study* and the *2006 Waste Disposal and Diversion Findings for Selected Industry Groups*. The results of the present study provide CalRecycle with updated information about disposal and diversion activities among commercial and multi-family generators statewide and by industry group.

Summary of Approach

A total of 837 unique commercial generator sites and 52 unique multi-family generator sites participated in the study. Sites were recruited from the five regions of the state designed for this study: Bay Area, Coastal, Mountain, Southern, and Central Valley. Sampling occurred during four seasons in 2014. Recruitment staff gathered data from each participating site to (1) determine how to arrange and conduct visits for data collection purposes, (2) quantify and characterize disposal and diversion, and (3) correlate disposal and diversion information with other information about the generator

(such as number of employees, participation in recycling programs, number of visitors, etc.).

The study included the following 16 industry groups, as well as multi-family complexes:

- Arts, Entertainment, & Recreation
- Durable Wholesale & Trucking
- Education
- Hotels & Lodging
- Manufacturing – Electronic Equipment
- Manufacturing – Food & Nondurable Wholesale
- Manufacturing – All Other
- Medical & Health
- Public Administration
- Restaurants
- Retail Trade – Food & Beverage Stores
- Retail Trade – All Other
- Services – Management, Administrative, Support, & Social
- Services – Professional, Technical, & Financial
- Services – Repair & Personal
- Not Elsewhere Classified

Industry groups were designed according to several factors: grouping business types with similar waste generation profiles and purposes; focusing on industries that generate large amounts of organics; focusing on industries with high employment in California; combining industries with less employment or fewer diversion opportunities into a final group; and project budget. The construction industry group was not included in this study because waste associated with this industry is mainly generated at building sites rather than the site of the business office. Waste disposed from construction activities and sites was characterized in a separate CalRecycle study titled *California 2014 Waste Characterization Study*.

Disposed waste was characterized by obtaining one 200-pound sample from each disposal stream at each site and hand-sorting it into 82 material categories. Diverted materials were characterized by obtaining one sample of up to 125 pounds from each diversion stream at each site and characterizing it according to the same 82 material categories used for disposal samples. Disposal and diversion were quantified through

measurements of material accumulation in dumpsters, interviews with staff, examination of disposal and diversion records, and inspection of recycling and diversion systems during on-site visits. Generation rates for disposal and diversion streams were determined on a per employee basis for businesses and per occupied unit for multi-family complexes.

Summary of Findings

For the overall commercial sector, findings are presented in three ways:

- First, an overview of the quantity generated in each material stream: Disposed, Curbside Recycle, Curbside Organics, and Other Diversion.
- Second, a breakdown of the composition of materials in each stream, according to potential recoverability.
- Third, a summary of the total generation by recoverability group. This includes materials that were diverted as well as divertible materials that were placed in the Disposed stream.

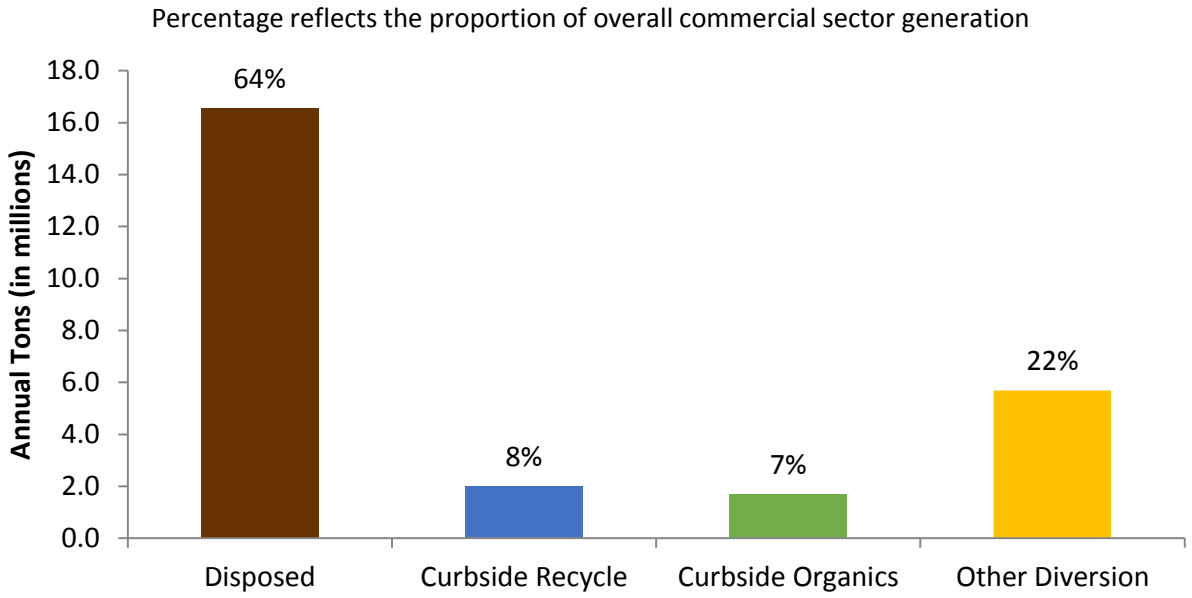
Several additional tables and figures follow the overall commercial sector summaries. These additional tables and figures include:

- A summary of total generation for each group, broken down by stream.
- An overview of the generation rate and diversion rate for each industry group.
- Key metrics for each group, including the three most prevalent divertible materials.

Key Findings for the Overall Commercial Sector

Figure 1 presents the annual tons for each material stream in the overall commercial sector. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams, such as food in recycling bins or glass in organics bins. As shown, almost two-thirds of the material generated at businesses went to the Disposed stream, while the remaining one-third was in the diversion streams.

Figure 1. Annual Tons by Waste Stream: Overall Commercial Sector



Note: Numbers may not total exactly due to rounding.

The 82 material types included in the study were aggregated into five recoverability groups: **Curbside Recyclable**, **Compost/Mulch**, **Other Recyclable**, **Recoverable Inerts**, and **Other Materials**. Materials were classified based on whether they were commonly accepted in curbside recycling programs; commonly used for compost or mulch; generally recyclable through other means (such as electronic waste or textiles); recoverable through construction and demolition programs (inerts such as concrete and asphalt), or not usually recovered. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Each material stream was composed of many different material types and each of those material types was assigned to one of the five recoverability groups. Figure 2 breaks down the potential recoverability (by recoverability group) for each stream in the overall commercial sector. As shown, **Compost/Mulch** accounted for almost half of the Disposed stream. The Other Diversion stream was nearly evenly split among **Curbside Recyclable**, **Compost/Mulch**, and **Other Recyclable** materials. Figure 2 illustrates that recyclable materials were found in the Disposed stream and that materials not usually recovered ("**Other Materials**") were indeed recovered by some businesses. In fact, materials of all recoverability types were found in all streams.

Figure 2. Recoverability by Stream: Overall Commercial Sector

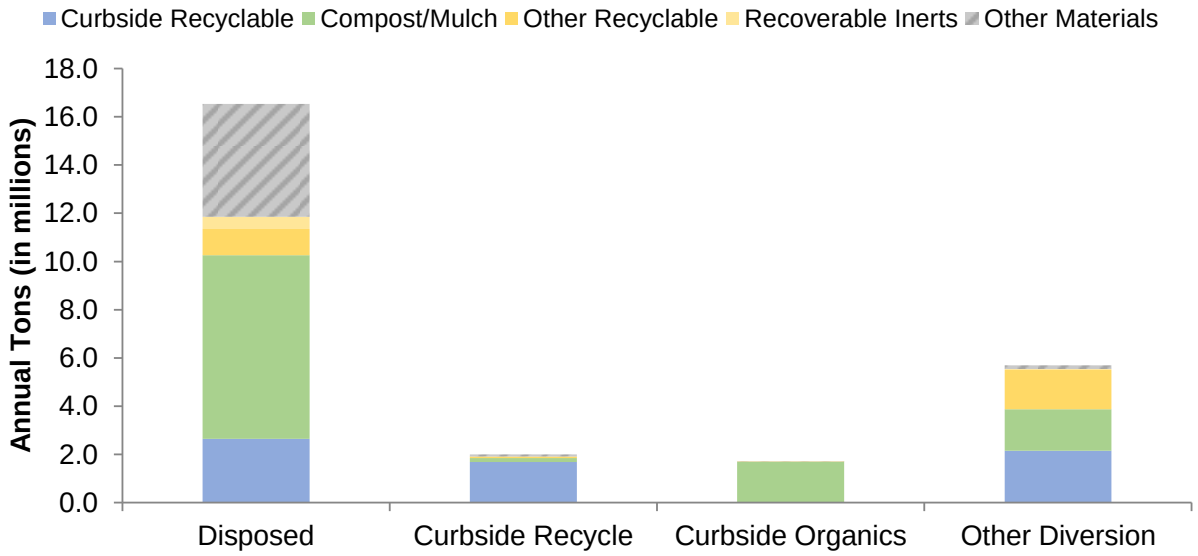
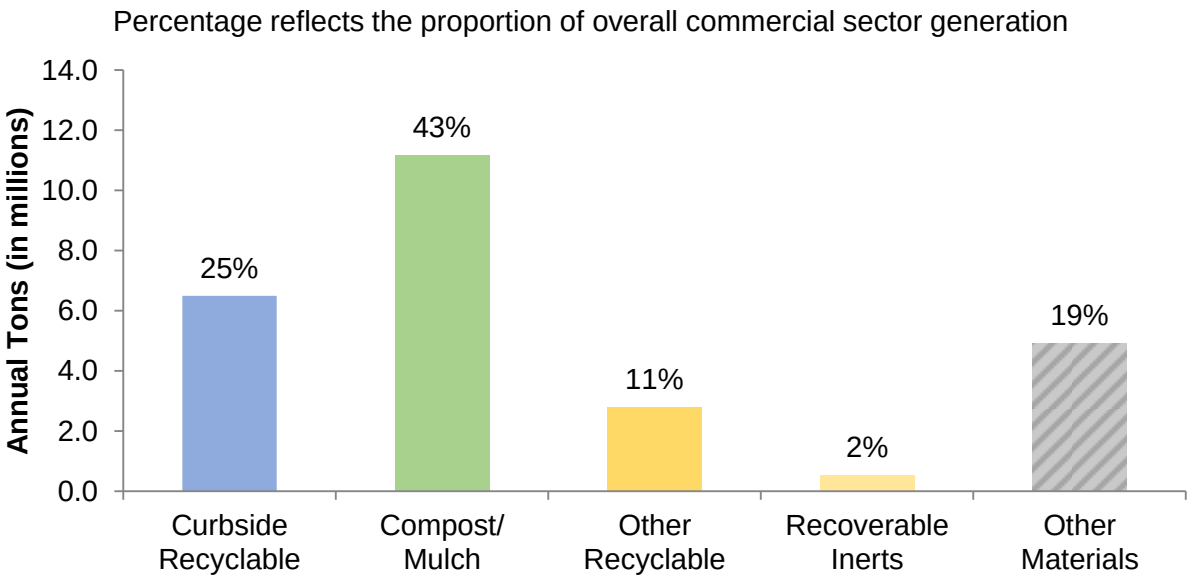


Figure 3 summarizes each recoverability group's proportion of total generation, based on the types of materials, regardless of which stream they were found in. Each bar includes materials both diverted and disposed. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 3 illustrates, approximately 43 percent of total generation in the overall commercial sector was material in the **Compost/Mulch** recoverability group, and approximately 25 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 81 percent of the overall commercial sector generation.

Figure 3. Recoverability of Materials Generated in the Overall Commercial Sector



Taken together, Figures 1, 2, and 3 show that a large part of the discards generated by the commercial sector are recoverable, and there is significant potential to increase diversion of these materials from disposal. The remainder of this report provides details on the commercial waste stream to help understand industry sources for both disposed and recovered materials.

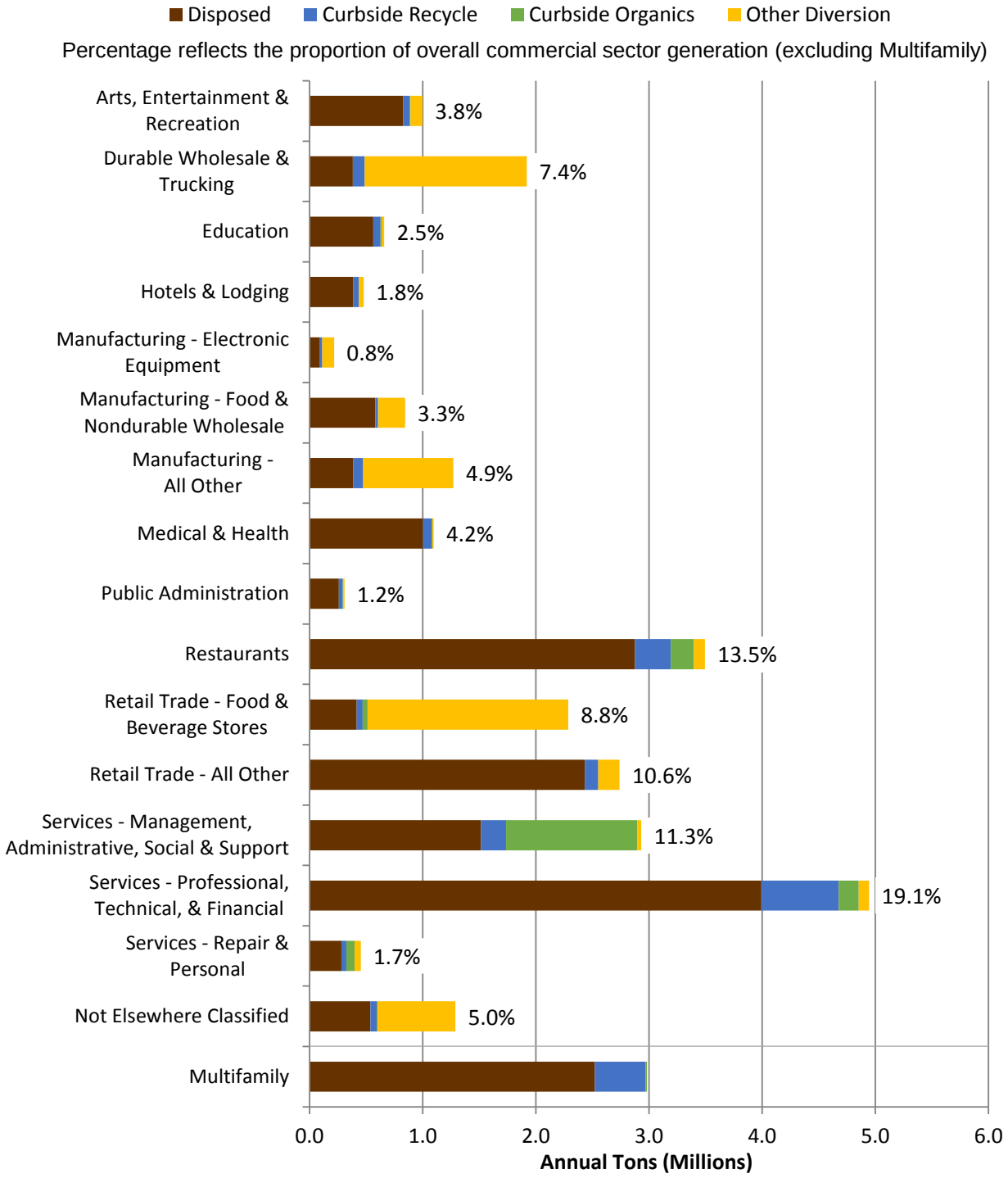
Key Findings for Industry Groups

Businesses generate waste in different ways—for example, restaurants and banks generate different types of materials. A business' waste generation pattern, its waste management practices, and the prevalence of that business type in California have an influence on the overall commercial sector waste stream. This section highlights key findings for several of the largest industry groups.

- The Services–Professional, Technical, and Financial group accounted for approximately 19 percent of overall commercial sector generation, making it the largest generator in the state. This group also employs the most people in California. Examples of business types in this group include banks, real estate agencies, architecture firms, and engineering companies. The majority of generation in this group is in the Disposed stream: materials that are disposed directly from the businesses without further significant recovery.
- At nearly 14 percent of overall generation, Restaurants is the second-largest industry group in the study. For Restaurants, the largest portion of the material generated went to the Disposed waste stream. Although more restaurants are participating in food diversion programs, food is the most prevalent divertible material type in the Restaurants' disposed waste.
- Services–Management, Administrative, Social, and Support and Retail Trade-All Other are the only other groups to generate more than 10 percent of the overall commercial sector waste. These two groups have very different total generation composition profiles. Nearly 90 percent of the material generated by the "Retail Trade-All Other category went to the Disposed stream, but that proportion was approximately 52 percent in the Services-Management, Administrative, Social and Support group.
- Manufacturing–Electronic Equipment accounted for less than 1 percent of the overall commercial sector generation, making it the smallest group (by generation) in the state. Manufacturing-Electronic Equipment includes businesses manufacturing physical goods such as computers, radios, computing and memory chips, transformers, electrical appliances, and batteries, but it does not include software developers.

Figure 4 summarizes the annual generation by material stream for each industry group and the multi-family group. The percentages reflect that group's proportion of total commercial sector generation (nearly 26 million tons), excluding the multi-family group.

Figure 4. Annual Generation for Industry Groups, by Stream



The industry groups addressed by this study that achieve the highest diversion rates do so mainly by implementing effective programs to divert corrugated cardboard boxes, scrap metal, food and other organics, or pallets. Of the groups addressed in this study, Durable Wholesale and Trucking and Retail–Food and Beverage Stores have the highest diversion rates. Businesses in these groups divert 80 percent and 82 percent of their total generation, respectively. These groups achieve the vast majority of their diversion outside the normal curbside collection programs, primarily through back-hauling pallets for reuse, directly selling their baled cardboard and scrap metal, or self-hauling their compostable materials to organics processors.

The Education and Multi-Family industry groups each divert an estimated 15 percent of their generation. Retail Trade–All Other and Medical and Health businesses have the lowest diversion rates, at 11 percent and 9 percent respectively.

The generation and diversion rate information, on a per employee basis, is summarized in Table 1.

Table 1. Generation Rate Summary by Weight, by Group (TPEPY)

		Tons per Employee per Year					Diversion Rate
Group Number and Name		Disposed	Curbside Recycle	Curbside Organics	Other Diversion	Generation	
Overall Commercial Sector		**1.13**	**0.14**	**0.12**	**0.39**	**1.77**	**36%**
1	Arts, Entertainment, & Recreation	2.56	0.17	0.03	0.33	**3.08**	17%
2	Durable Wholesale & Trucking	0.60	0.17	0.00	2.23	**2.99**	80%
3	Education	0.43	0.05	0.01	0.02	**0.50**	15%
4	Hotels & Lodging	1.72	0.22	0.01	0.18	**2.14**	20%
5	Manufacturing - Electronic Equipment	0.31	0.07	0.00	0.36	**0.75**	58%
6	Manufacturing - Food & Nondurable Wholesale	1.28	0.05	0.01	0.51	**1.85**	31%
7	Manufacturing - All Other	0.45	0.10	0.00	0.94	**1.50**	70%
8	Medical & Health	0.67	0.05	0.01	0.01	**0.74**	9%
9	Public Administration	0.32	0.04	0.00	0.02	**0.39**	16%
10	Restaurants	2.40	0.26	0.17	0.08	**2.92**	18%
11	Retail Trade - Food & Beverage Stores	1.21	0.15	0.13	5.15	**6.64**	82%
12	Retail Trade - All Other	2.14	0.10	0.00	0.17	**2.41**	11%
13	Services - Management, Administrative, Support, & Social	0.74	0.11	0.57	0.02	**1.44**	48%
14	Services - Professional, Technical, & Financial	1.86	0.32	0.08	0.04	**2.31**	19%
15	Services - Repair & Personal	0.94	0.15	0.24	0.18	**1.50**	38%
16	Not Elsewhere Classified	0.50	0.05	0.01	0.64	**1.20**	58%
17	**Multifamily***	**0.74**	**0.13**	**0.00**		**0.87**	**15%**

**Multifamily is reported in tons per unit per year*

Based on the field data collection, key findings for each industry group are presented below in Table 2 through Table 19. These key findings include disposed tons per employee per year (TPEPY), diverted TPEPY, disposed tons, diverted tons, diversion rate, and the three most prevalent divertible materials (by weight) in the Disposed stream.

In general, compostable materials such as food, leaves and grass, and lower-grade compostable papers present an opportunity to greatly increase diversion for most of the industry groups. Recyclable papers such as cardboard and mixed paper also show significant potential for further recycling, as does lumber, for several industry groups.

Table 2. Key Findings and Metrics: Overall Commercial Sector

Overall Commercial Sector				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.13	0.64	16,536,664	9,396,087	36%
Top Three Diversion Opportunities in Disposed Stream				
• Food (24%, 4,035,748 tons) • Remainder/Composite Paper - Compostable (10%, 1,673,592 tons) • Clean Pallets & Crates (4%, 735,005 tons)				

Table 3. Key Findings and Metrics: Arts, Entertainment, & Recreation

Arts, Entertainment, & Recreation				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
2.56	0.52	829,661	168,036	17%
Top Three Diversion Opportunities in Disposed Stream				
• Food (34%, 278,639 tons) • Remainder/Composite Paper - Compostable (9%, 78,350 tons) • Leaves and Grass (6%, 48,015 tons)				

Table 4. Key Findings and Metrics: Durable Wholesale & Trucking

Durable Wholesale & Trucking				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.60	2.40	381,767	1,538,803	80%
Top Three Diversion Opportunities in Disposed Stream				
• Clean Pallets & Crates (13%, 50,937 tons) • Food (10%, 38,192 tons) • Remainder/Composite Paper - Compostable (6%, 24,689 tons)				

Table 5. Key Findings and Metrics: Education

Education				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.43	0.07	562,442	97,926	15%
Top Three Diversion Opportunities in Disposed Stream				
• Food (34%, 189,957 tons) • Remainder/Composite Paper - Compostable (13%, 71,730 tons) • Other Miscellaneous Paper - Other (4%, 22,709 tons)				

Table 6. Key Findings and Metrics: Hotels & Lodging

Hotels & Lodging				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.72	0.42	384,327	93,712	20%
Top Three Diversion Opportunities in Disposed Stream				
• Food (32%, 123,483 tons) • Remainder/Composite Paper - Compostable (9%, 34,549 tons) • Other Miscellaneous Paper - Other (3%, 10,188 tons)				

Table 7. Key Findings and Metrics: Manufacturing – Electronic Equipment

Manufacturing - Electronic Equipment				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.31	0.43	91,265	125,666	58%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (13%, 11,945 tons) • Food (11%, 10,310 tons) • Clean Pallets & Crates (11%, 9,598 tons)				

Table 8. Key Findings and Metrics: Manufacturing – Food & Nondurable Wholesale

Manufacturing - Food & Nondurable Wholesale				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.28	0.57	582,486	261,646	31%
Top Three Diversion Opportunities in Disposed Stream				
• Food (38%, 220,403 tons) • Remainder/Composite Paper - Compostable (8%, 45,184 tons) • Clean Pallets & Crates (4%, 23,205 tons)				

Table 9. Key Findings and Metrics: Manufacturing – All Other

Manufacturing - All Other				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.45	1.05	384,292	885,586	70%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (8%, 29,777 tons) • Food (7%, 26,907 tons) • Clean Pallets & Crates (6%, 21,632 tons)				

Table 10. Key Findings and Metrics: Medical & Health

Medical & Health				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.67	0.06	1,003,316	93,629	9%
Top Three Diversion Opportunities in Disposed Stream				
• Food (22%, 216,983 tons) • Remainder/Composite Paper - Compostable (11%, 109,841 tons) • Leaves and Grass (3%, 26,201 tons)				

Table 11. Key Findings and Metrics: Public Administration

Public Administration				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.32	0.06	259,137	50,354	16%
Top Three Diversion Opportunities in Disposed Stream				
• Food (17%, 44,508 tons) • Remainder/Composite Paper - Compostable (14%, 37,208 tons) • Clean Pallets & Crates (5%, 13,416 tons)				

Table 12. Key Findings and Metrics: Restaurants

Restaurants				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
2.40	0.52	2,876,653	617,826	18%
Top Three Diversion Opportunities in Disposed Stream				
• Food (51%, 1,461,319 tons) • Remainder/Composite Paper - Compostable (12%, 350,240 tons) • Newspaper (3%, 76,093 tons)				

Table 13. Key Findings and Metrics: Retail Trade – Food & Beverage Stores

Retail Trade - Food & Beverage Stores				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.21	5.43	417,791	1,868,403	82%
Top Three Diversion Opportunities in Disposed Stream				
• Food (42%, 173,504 tons) • Remainder/Composite Paper - Compostable (9%, 37,501 tons) • Other Miscellaneous Paper - Other (3%, 13,492 tons)				

Table 14. Key Findings and Metrics: Retail Trade – All Other

Retail Trade - All Other				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
2.14	0.27	2,433,989	306,012	11%
Top Three Diversion Opportunities in Disposed Stream				
• Food (18%, 437,469 tons) • Remainder/Composite Paper - Compostable (9%, 209,655 tons) • Clean Pallets & Crates (6%, 135,886 tons)				

Table 15. Key Findings and Metrics: Services – Management, Administrative, Support, & Social

Services - Management, Administrative, Support, & Social				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.74	0.70	1,514,667	1,417,462	48%
Top Three Diversion Opportunities in Disposed Stream				
• Food (25%, 376,502 tons) • Remainder/Composite Paper - Compostable (11%, 164,498 tons) • Leaves and Grass (6%, 86,284 tons)				

Table 16. Key Findings and Metrics: Services – Professional, Technical, & Financial

Services - Professional, Technical, & Financial				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.86	0.44	3,994,643	949,869	19%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (10%, 395,521 tons) • Clean Pallets & Crates (8%, 332,687 tons) • Food (8%, 330,452 tons)				

Table 17. Key Findings and Metrics: Services – Repair & Personal

Services - Repair & Personal				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.94	0.57	281,371	170,866	38%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (9%, 24,506 tons) • Food (7%, 20,927 tons) • Uncoated Corrugated Cardboard (5%, 15,017 tons)				

Table 18. Key Findings and Metrics: Not Elsewhere Classified

Not Elsewhere Classified				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.50	0.70	538,858	750,291	58%
Top Three Diversion Opportunities in Disposed Stream				
• Food (16%, 86,197 tons) • Remainder/Composite Paper - Compostable (9%, 48,398 tons) • Leaves and Grass (6%, 30,678 tons)				

Table 19. Key Findings and Metrics: Multi-Family

Multifamily				
Key Findings and Metrics				
Disposed TPUPY	Diverted TPUPY	Disposed Tons	Diverted Tons	Diversion Rate
0.74	0.13	2,524,183	460,083	15%
Top Three Diversion Opportunities in Disposed Stream				
• Food (25%, 625,274 tons) • Textiles (7%, 188,044 tons) • Remainder/Composite Paper - Compostable (7%, 170,875 tons)				

Additional Analysis – Assessment of Commercial Curbside Diversion

In 2012, California's Mandatory Commercial Recycling (MCR) law went into effect, requiring businesses to take actions to divert materials from disposal. Businesses can comply by source-separating materials and having them delivered for recycling or composting. They can also comply by subscribing to a service that may include mixed-waste processing (i.e., recyclables are not separated and the entire waste stream is processed), as long as the results are comparable to source separation. In order to determine what's comparable to source separation, an assessment of that source separation is needed. This part of the study provides one assessment of source separation.

This special analysis aimed to assess the performance of curbside programs by focusing on curbside diversion by businesses and multi-family sites. Curbside programs capture the materials that would be processed by a "clean" material recovery facility (MRF) or an organics processing facility. The generator sites used for this task were a subset of those used for the whole study. They were selected to represent the make-up of California's overall commercial and multi-family sector as a whole, not by industry group. To be included, the business site must have curbside recycling and/or organics service. Since the Mandatory Commercial Recycling law includes multi-family sites, the multi-family sector was included in the analysis. The analysis excluded Other Diversion—the items diverted through other methods such as back-hauling, self-hauling, take-back programs, and other means.

For this analysis the field crew performed a more detailed sort of Disposed, Curbside Recycle, and Curbside Organics samples from the subset of generators selected to participate in this part of the study. The field crew collected additional details on the level and the source of contamination for certain materials in these samples. The purpose of the contamination subsort was to estimate the fraction of the sorted materials that a MRF or organics processor could recover, recognizing some "recoverable" material arriving at a facility is too contaminated to be recovered.

As shown in Table 20, approximately 21 percent of the material placed in bins at businesses and multi-family complexes is recovered through curbside diversion programs capturing the standard recoverable materials.

Table 20. Recovery Rate for Commercial Curbside Diversion

	Disposed Tons			Curbside Recycle Tons			Curbside Organics Tons			Recovered Tons	Generated Tons	Percent Recovered
	Clean	Bin Contaminated	Source Contaminated	Clean	Bin Contaminated	Source Contaminated	Clean	Bin Contaminated	Source Contaminated			
Uncoated Corrugated Cardboard	155,292	71,482	8,253	1,035,182	17,201	58,076	3,116	63	18	**1,038,380**	**1,348,685**	**77.0%**
Paper Bags	19,268	21,988	6,714	15,945	62	485	39	0	0	**15,984**	**64,502**	**24.8%**
Newspaper	104,316	120,611	19,708	89,170	34,772	0	45	812	0	**90,027**	**369,434**	**24.4%**
White Ledger Paper	119,029	43,706	8,382	133,712	1,867	1,123	0	48	0	**133,760**	**307,867**	**43.4%**
Other Office Paper	116,385	57,112	6,007	103,406	3,071	1,733	45	369	0	**103,821**	**288,130**	**36.0%**
Magazines and Catalogs	44,032	8,720	23,621	79,857	1,540	2,018	0	0	0	**79,857**	**159,788**	**50.0%**
Phone Books and Directories	2,097	377	1,597	2,025	417	151	0	0	0	**2,025**	**6,664**	**30.4%**
Other Miscellaneous Paper - Compostable	14,048	14,805	16,727	47,765	1,779	13,277	6,065	397	1,756	**8,218**	**116,618**	**7.0%**
Other Miscellaneous Paper - Other	174,951	175,361	45,380	118,719	1,496	4,950	420	202	0	**119,341**	**521,479**	**22.9%**
Remainder/Composite Paper - Compostable	194,629	7,396	1,098,247	14,581	51	4,250	0	3,954	23	**3,978**	**1,323,132**	**0.3%**
Clear Glass Bottles and Containers - CRV*	54,505	N/A	N/A	29,604	N/A	N/A	424	N/A	N/A	**29,604**	**84,533**	**35.0%**
Clear Glass Bottles and Containers - Non-CRV*	48,486	N/A	N/A	41,179	N/A	N/A	4,628	N/A	N/A	**41,179**	**94,292**	**43.7%**
Green Glass Bottles and Containers - CRV*	12,200	N/A	N/A	9,563	N/A	N/A	0	N/A	N/A	**9,563**	**21,762**	**43.9%**
Green Glass Bottles and Containers - Non-CRV*	36,110	N/A	N/A	45,811	N/A	N/A	7,325	N/A	N/A	**45,811**	**89,246**	**51.3%**
Brown Glass Bottles and Containers - CRV*	32,698	N/A	N/A	20,823	N/A	N/A	397	N/A	N/A	**20,823**	**53,918**	**38.6%**
Brown Glass Bottles and Containers - Non-CRV*	5,293	N/A	N/A	6,551	N/A	N/A	1,125	N/A	N/A	**6,551**	**12,969**	**50.5%**
Other Colored Glass Bottles and Containers - CRV*	297	N/A	N/A	0	N/A	N/A	0	N/A	N/A	**0**	**297**	**0.0%**
Other Colored Glass Bottles and Containers - Non-CRV*	667	N/A	N/A	349	N/A	N/A	0	N/A	N/A	**349**	**1,016**	**34.3%**
Tin/Steel Cans - CRV Bimetal Containers	1,104	0	4,345	1,260	0	39	22	0	0	**1,260**	**6,770**	**18.6%**
Tin/Steel Cans - Other	20,125	6,214	46,215	13,466	0	8,870	0	617	0	**13,466**	**95,507**	**14.1%**
Aluminum Cans - CRV	13,151	1,261	3,879	4,610	0	0	62	20	2	**4,610**	**22,984**	**20.1%**
Aluminum Cans - Non-CRV	2,787	161	3,126	2,151	0	936	0	0	0	**2,151**	**9,161**	**23.5%**
PETE Containers - CRV	31,151	1,258	12,569	20,186	0	564	373	59	0	**20,186**	**66,159**	**30.5%**
PETE Containers - Non-CRV	6,092	1,098	26,843	18,511	487	12,689	32	152	13	**18,511**	**65,918**	**28.1%**
HDPE Containers - CRV	3,863	0	3,487	1,318	0	13	0	0	0	**1,318**	**8,681**	**15.2%**
HDPE Containers - Non-CRV	10,182	1,333	47,174	20,752	1,561	4,710	23	56	0	**20,752**	**85,790**	**24.2%**
Miscellaneous Plastic Containers - CRV	1,229	256	3,713	282	0	17	0	0	0	**282**	**5,497**	**5.1%**
Miscellaneous Plastic Containers - Non-CRV	9,717	1,032	35,081	28,259	0	5,916	197	50	52	**28,259**	**80,303**	**35.2%**
Food*	3,320,900	N/A	N/A	65,473	N/A	N/A	275,510	N/A	N/A	**275,510**	**3,661,883**	**7.5%**
Leaves and Grass*	432,571	N/A	N/A	416	N/A	N/A	1,373,674	N/A	N/A	**1,373,674**	**1,806,661**	**76.0%**
Prunings and Trimmings*	259,666	N/A	N/A	6,269	N/A	N/A	28,603	N/A	N/A	**28,603**	**294,538**	**9.7%**
Standard Recoverable Materials Subtotal	***5,246,840***	***534,172***	***1,421,068***	***1,977,196***	***64,305***	***119,817***	***1,702,125***	***6,800***	***1,863***	***3,537,852***	***11,074,185***	***31.9%***
All Other Materials**	N/A	N/A	5,330,706	N/A	N/A	288,020	N/A	N/A	5,121	**0**	**5,623,847**	**0%**
Statewide Total for Businesses and Multifamily Complexes with Curbside Diversion	**5,246,840**	**534,172**	**6,751,774**	**1,977,196**	**64,305**	**407,836**	**1,702,125**	**6,800**	**6,984**	**3,537,852**	**16,698,032**	**21.2%**

** These materials were not subsorted for contamination. All glass containers, food, leave and grass, and prunings and trimmings are assumed to be recovered if in the appropriate bin.*

***These are materials that are not typically recoverable and most of these materials were not subsorted for contamination.*

Introduction and Overview

The California Department of Resources Recycling and Recovery (CalRecycle) commissioned this study of commercial and multi-family waste generators to quantify and characterize material that was disposed or diverted by representative members of key industry groups. The resulting data provided CalRecycle with information about disposal and diversion activities among commercial and multi-family generators as a whole and by industry group. The industry group data provided information on sources of materials disposed and diverted by businesses and can help businesses, local governments, and CalRecycle better direct efforts to increase diversion and reduce disposal.

This study is part of a larger project that also included a disposal facility-based waste characterization study. The entire project consisted of four main tasks:

- Task 1: A comprehensive statewide characterization of materials disposed in California's waste stream, from residential, commercial, and self-hauled sectors, using disposal facility-based sampling. The results of this study are reported separately in *2014 Disposal-Facility-Based Characterization of Solid Waste in California*.
- Task 2: A characterization of materials disposed from industry groups, and the commercial sector as a whole, using generator-based sampling.
- Task 3: An assessment of recovery of materials from commercial source-separation systems, using generator-based sampling (using data collected from Task 2 and Task 4).
- Task 4: A characterization of materials diverted from industry groups, and the commercial sector as a whole, using generator-based sampling.

The results of Tasks 2, 3, and 4 are reported here. These tasks are described further in Appendix A: Detailed Methodology.

CalRecycle conducted similar generator studies as part of the *1999 Statewide Waste Characterization Study* and the *2006 Waste Disposal and Diversion Findings for Selected Industry Groups*. The results from this study are not directly comparable with those previous studies due to changes in the methodology. Industry groups in the previous studies were based on Standard Industrial Classification (SIC) business codes; however, this study uses the current system, the North American Industrial Classification System (NAICS) business codes, to group businesses. The number of industry groups, and the types of businesses included in those industry groups, is different than in previous studies. Perhaps the biggest difference is in the number of material streams included. The 1999 study focused exclusively on the disposed stream, while the 2006 study included both disposal and a more limited characterization and quantification of the diversion streams than this study. This study included detailed

sorting of materials in curbside recycling and curbside organics bins as well as quantification of materials diverted through other means.

Objectives of the Study

The objective of this study was to develop representative disposal and diversion composition, quantity, and rate data for key industry groups and for the multi-family sector. The rate data is presented as tons per employee per year (TPEPY) for businesses and as tons per occupied unit per year (TPUPY) for multi-family sites. This study included the entire commercial sector, divided into 16 industry groups, as well as multi-family properties. This study was completed using a carefully designed sequence of field sampling, sorting, and quantification activities involving interviews and visits with representative commercial establishments and multi-family properties. The resulting data provides a complete picture of waste generated by commercial and multi-family generators, as well as information on the types of diversion activities occurring in the business sectors and multi-family sites included in the study. CalRecycle will use the data from the study to update its waste characterization database.

Contributing Consultants

This study was managed by Cascadia Consulting Group, Inc., an environmental consulting firm based in Seattle, Washington. It relied on data collection activities conducted by Sky Valley Associates and L2 Environmental. The distribution of responsibilities was as follows:

- Cascadia Consulting Group, Inc.
    - Project management
    - Study design
    - Coordination of business site recruitment
    - Coordination of data collection
    - Data entry and analysis
    - Reporting
- Sky Valley Associates
    - Collection, characterization, and quantification of disposed waste
- L2 Environmental
    - Collection, characterization, and quantification of diverted material

The consultants provided training to CalRecycle staff in the recruitment and field data collection procedures. CalRecycle staff assisted with the facility recruitment and some sample site recruitment. For the purposes of this study, we will refer to any of the parties mentioned here as “the project team.”

Material Streams

Text, tables, and figures throughout this report refer to the four waste streams included in the study: Disposed, Curbside Recycle, Curbside Organics, and Other Diversion. Each of those streams is defined as follows.

> **Disposed –** materials headed to a landfill (either directly or indirectly via transfer station) with no further processing. May be collected by a third party or self-hauled.
>
> **Curbside Recycle –** non-putrescible materials hauled by a contracted third party to a material recovery facility (MRF) that receives source-separated recyclable materials (i.e., "clean MRF").
>
> **Curbside Organics –** putrescible material hauled by a contracted third party to a permitted facility mainly engaged in producing compost or mulch, or in anaerobic digestion of organics. Minor mechanical separation of contaminants or recyclable materials may occur at the facility prior to composting or digestion.
>
> **Other Diversion –** all other forms of diversion including self-haul of materials to a MRF or compost facility, mixed-waste processing, source reduction, on-site composting, and reuse. This also includes materials that the generator sells directly to a market. For example, scrap metal sold directly to a recycler or bedding and manure sold as fertilizer by a horse racing track to a local farm is counted as Other Diversion.

Every stream of materials characterized or quantified at every site is assigned to one of these four streams. In many of the tables, figures, and text throughout the report, the four streams are further aggregated in two ways:

> **Generation –** the sum of the four streams.
>
> **Curbside Diversion –** the sum of the Curbside Recycle quantities and the Curbside Organics quantities.

Explanation of Tasks

This generator study was divided into two major tasks:

- Calculate industry group specific disposed materials composition and quantity data through sampling at approximately 850 commercial and multi-family generator sites. This task is referred to as Task 2.
- Calculate industry group specific diverted materials composition and quantity data through sampling at a 430-member subset of the commercial and multi-family generator sites recruited for the study. This task, referred to as Task 4, included any materials that would normally be a part of the waste stream diverted through any method (including curbside diversion, back-hauling, self-hauling, take-back programs, and other methods). It excluded diversion of hazardous materials; medical waste; manufacturing and process chemicals;

fats, oils, and grease; industrial quantities of tires; and other items that are not normally accepted for disposal at municipal solid waste landfills. Although e-waste is banned from landfills, the study did characterize and quantify the diversion of these materials.

The study also included a special analysis (referred to as Task 3) on a subset of the generator sites included in Task 4. Task 3 aimed to assess the performance of curbside programs by focusing on curbside diversion by businesses and multi-family sites. The analysis excluded Other Diversion—the items diverted through back-hauling, self-hauling, take-back programs, and other such methods.

The project team used the same basic methodology in all three tasks; the differences among tasks were isolated to the material streams characterized, the methods used to allocate samples among the regions and industry groups, and the level of detail in the material list used for sorting.

Industry Groups

The project team recruited commercial generators from 16 industry groups as well as multi-family complexes. Industry groups were designed using the North American Industry Classification System (NAICS), and with several factors in mind: business types with similar waste generation profiles and purposes; industries that generate large amounts of organics; industries with high employment in California; industries with less employment or less diversion opportunities; and project budget. The construction industry group was not included in this study because waste associated with this industry is mainly generated at building sites rather than the site of the business office. Waste generated from construction activities and sites was characterized in a separate disposal facility-based study by CalRecycle.

Industry groups 8 and 16 include subgroups. The project team allocated samples to the listed subgroups but reported results at the group level. The industry groups and subgroups included in this study are listed in Table 21, and the three-digit NAICS codes corresponding to each of the 16 industry groups are listed in Appendix A: Detailed Methodology.

The 16 business groups (and their associated subgroups) were further divided by size based on reported employment at the site, as noted in Table 21. For each group, the number of employees distinguishes small businesses from large businesses. The size break was selected so that approximately 20 percent of employment in a group fell into small businesses (ones that have fewer employees than the size break number) and approximately 80 percent fell into large businesses (the other businesses in the group). During recruitment, the project team attempted to obtain a 4:1 ratio between large businesses and small businesses for each industry group. This was a group level target; the ratio within each region or season may not have been 4:1. Since small businesses often represent the majority of the number of businesses, but large businesses often represent the majority of employment in an industry group, this ensured each size class was properly represented. Very small businesses, those with fewer than five employees, were excluded from the study because they do not generate enough

material weekly to meet the minimum sample weights and frequently share bins with other businesses. For most industry groups, businesses with fewer than five employees made up far less than 10 percent of all employment for the group; overall, they account for 5 percent of statewide employment.

The multi-family group included complexes with five or more units; complexes with four or fewer units were not included in this study. Disposal characterization and quantity data for multi-family sites in the first two seasons was collected in a separate disposal facility-based study. Over the final two seasons, multi-family characterization and quantity data was collected as part of Task 2. Multi-family diversion characterization was part of Task 4 in this study for all four seasons. The multi-family group was not divided into subgroups by size.

Table 21. Industry Groups and Size Breaks between Small and Large Businesses

Industry Group		Size Break
Number	**Name**	
1	Arts, Entertainment, & Recreation	20
2	Durable Wholesale & Trucking	20
3	Education	20
4	Hotels & Lodging	50
5	Manufacturing - Electronic Equipment	100
6	Manufacturing - Food & Nondurable Wholesale	20
7	Manufacturing - All Other	50
8	**Medical & Health**	
	Ambulatory Health Care Services	*10*
	Hospital, Nursing, & Residential Care Facilities	*50*
9	Public Administration	20
10	Restaurants	20
11	Retail Trade - Food & Beverage Stores	20
12	Retail Trade - All Other	10
13	Services - Management, Administrative, Support, & Social	20
14	Services - Professional, Technical, & Financial	10
15	Services - Repair & Personal	10
16	**Not Elsewhere Classified**	
	Agriculture & Resources	*20*
	Utilities & Waste Management	*20*
	Retail Trade - Building Materials & Garden	*20*
	Transportation - All	*20*
	Motion Picture & Sound Recording	*20*
01	Multifamily	N/A

Sample Allocations

The project team ultimately collected data from 837 business sites and 52 multi-family complexes. The number of sites that participated in the generator-based disposal study (Task 2) and contributed each type of data (composition data or quantity data) are summarized in Table 22.

Table 22. Businesses Sampled – Disposal, by Group

Group Number	Group Name	Sample Goals	Total Sites Visited	Sites Included in Composition Calculations	Sites Included in Quantity Calculations	Total Streams Sampled
1	Arts, Entertainment, & Recreation	50	54	54	53	54
2	Durable Wholesale & Trucking	50	51	51	45	52
3	Education	50	51	51	48	51
4	Hotels & Lodging	50	51	51	47	51
5	Manufacturing - Electronic Equipment	50	51	50	38	51
6	Manufacturing - Food & Nondurable Wholesale	50	52	51	47	53
7	Manufacturing - All Other	50	53	53	51	53
8	**Medical & Health**	**50**	**55**	**55**	**53**	**55**
	Ambulatory Health Care Services	*25*	*25*	*25*	*25*	*25*
	Hospital, Nursing, & Residential Care Facilities	*25*	*30*	*30*	*28*	*30*
9	Public Administration	50	51	51	48	51
10	Restaurants	50	51	51	49	51
11	Retail Trade - Food & Beverage Stores	50	53	53	51	53
12	Retail Trade - All Other	50	53	53	51	53
13	Services - Management, Administrative, Support, & Social	50	54	54	52	54
14	Services - Professional, Technical, & Financial	50	52	52	44	53
15	Services - Repair & Personal	50	52	52	52	52
16	**Not Elsewhere Classified**	**50**	**53**	**53**	**49**	**53**
	Agriculture & Resources	*22*	*22*	*22*	*20*	*22*
	Utilities & Waste Management	*7*	*7*	*7*	*7*	*7*
	Retail Trade - Building Materials & Garden	*5*	*5*	*5*	*5*	*5*
	Transportation - All	*10*	*12*	*12*	*11*	*12*
	Motion Picture & Sound Recording	*6*	*7*	*7*	*6*	*7*
	Commercial Subtotals	***800***	***837***	***836***	***778***	***840***
	Multifamily	50	52	52	52	52
	Totals	**850**	**889**	**888**	**830**	**892**

The generator-based diversion study (Task 4) targeted 400 business and 30 multi-family sites for diversion sampling. Typically, diversion streams exhibit less variability from generator to generator than disposal streams. This homogeneity means fewer samples are required from diversion streams to achieve a given level of statistical confidence. For this reason, Task 4 targeted fewer generators than Task 2. The project team visited 481 generators and collected composition data from 445 generators. Those 481 generators divert material from more than 1,100 individual diversion streams. In addition to a curbside recycle stream and curbside organics stream, many generators have several other diversion streams such as diverted batteries or pallets back-hauled to a central distribution center for reuse. The number of generators included in the Task 4 diversion analysis is summarized in Table 23.

Table 23. Businesses Sampled – Diversion, by Group

Group Number	Group Name	Sample Goals	Total Sites Visited	Sites Included in Composition Calculations	Sites Included in Quantity Calculations	Total Streams Sampled
1	Arts, Entertainment, & Recreation	25	25	20	25	49
2	Durable Wholesale & Trucking	25	25	23	25	78
3	Education	25	26	24	26	66
4	Hotels & Lodging	25	26	25	26	67
5	Manufacturing - Electronic Equipment	25	25	24	25	91
6	Manufacturing - Food & Nondurable Wholesale	25	28	26	28	64
7	Manufacturing - All Other	25	26	24	26	91
8	**Medical & Health**	**25**	**33**	**29**	**33**	**62**
	Ambulatory Health Care Services	*13*	*18*	*15*	*18*	*29*
	Hospital, Nursing, & Residential Care Facilities	*12*	*15*	*14*	*15*	*33*
9	Public Administration	25	25	25	25	66
10	Restaurants	25	27	26	27	45
11	Retail Trade - Food & Beverage Stores	25	26	24	26	96
12	Retail Trade - All Other	25	24	21	24	44
13	Services - Management, Administrative, Support, & Social	25	27	26	27	53
14	Services - Professional, Technical, & Financial	25	41	38	41	102
15	Services - Repair & Personal	25	25	21	25	50
16	**Not Elsewhere Classified**	**25**	**33**	**31**	**33**	**75**
	Agriculture & Resources	*10*	*13*	*13*	*13*	*28*
	Utilities & Waste Management	*4*	*6*	*6*	*6*	*25*
	Retail Trade - Building Materials & Garden	*3*	*4*	*4*	*4*	*10*
	Transportation - All	*5*	*7*	*6*	*7*	*9*
	Motion Picture & Sound Recording	*3*	*3*	*2*	*3*	*3*
	Commercial Subtotals	***400***	***442***	***407***	***442***	***1,099***
	Multifamily	30	39	38	39	45
	Totals	**430**	**481**	**445**	**481**	**1,144**

The number of businesses included in the assessment of commercial source separation (Task 3) is summarized in Table 24. The distribution of sites with contamination subsorts reflects the makeup of California's commercial sector as a whole, based on employment.

Table 24. Businesses Included in Task 3 Analysis, by Group

		Disposed Stream		Curbside Diversion Streams		Total Sites with Contamination Subsort
Group Number	Group Name	Sites Included in Composition Calculations	Sites Included in Quantity Calculations	Sites Included in Composition Calculations	Sites Included in Quantity Calculations	
1	Arts, Entertainment, & Recreation	31	31	16	17	9
2	Durable Wholesale & Trucking	25	25	12	12	10
3	Education	44	42	22	22	20
4	Hotels & Lodging	37	35	21	21	6
5	Manufacturing - Electronic Equipment	33	27	17	17	4
6	Manufacturing - Food & Nondurable Wholesale	25	22	16	16	10
7	Manufacturing - All Other	25	23	16	16	13
8	**Medical & Health**	**36**	**35**	**28**	**28**	**27**
	Ambulatory Health Care Services	*13*	*13*	*14*	*14*	*14*
	Hospital, Nursing, & Residential Care Facilities	*23*	*22*	*14*	*14*	*13*
9	Public Administration	43	40	24	24	12
10	Restaurants	37	36	21	22	19
11	Retail Trade - Food & Beverage Stores	27	27	14	14	7
12	Retail Trade - All Other	32	30	17	17	19
13	Services - Management, Administrative, Support, & Social	40	39	24	24	24
14	Services - Professional, Technical, & Financial	28	26	35	35	33
15	Services - Repair & Personal	27	27	13	13	8
16	**Not Elsewhere Classified**	**32**	**30**	**23**	**25**	**21**
	Agriculture & Resources	*17*	*16*	*10*	*12*	*10*
	Utilities & Waste Management	*6*	*6*	*5*	*5*	*4*
	Retail Trade - Building Materials & Garden	*2*	*2*	*3*	*3*	*2*
	Transportation - All	*2*	*2*	*3*	*3*	*3*
	Motion Picture & Sound Recording	*5*	*4*	*2*	*2*	*2*
	Commercial Subtotals	***522***	***495***	***319***	***323***	***242***
	Multifamily	37	37	38	39	34
	Totals	**559**	**532**	**357**	**362**	**276**

Ideally, complete and high-quality data for both composition and waste quantity would be obtained for each site visited. This is not always the case. The recruitment goals put an emphasis on composition data, and were intended to be the minimum number of sites visited with complete composition data. For all tasks, if the actual number of sites visited exceeded the goal, it was primarily because for a particular site, either the composition or quantity information was not of high enough quality to include in the analysis. For example, the composition data for a site could be good but the quantity data was incomplete (i.e., a representative sample meeting minimum weight requirements was collected and sorted, but the overall quantity of materials could not be estimated with confidence). In this case, the site counted toward the goal, the composition data was included in the composition calculations, and the quantity data was not used. If the quantity data was good but the composition data was

Table 25. Example Recruitment Tracking

Site	Complete Data	
	Composition	Quantity
1	Yes	Yes
2		Yes
3	Yes	Yes
4	Yes	Yes
5	Yes	Yes
6		Yes
7	Yes	Yes
8	Yes	
9		Yes
10	Yes	Yes
11	Yes	
12	Yes	
13		Yes
14	Yes	Yes
Total	**10**	**11**

incomplete (i.e., the quantity of materials in the desired stream could be estimated with confidence but a representative composition sample could not be obtained and sorted), the site did not count toward the goal, the quantity data was included in the quantity calculations, the composition data was not used, and an additional site was recruited to make up for the missing composition data. This process was repeated until the recruitment goals were met. Table 25 illustrates an example in which 14 sites needed to be recruited to obtain 10 sites with good composition data (and 11 sites had sufficient quantity data).

Summary of Methods

This section describes the methodology that the project team used to complete this work. For a more detailed description of the study methodology, see Appendix A: Detailed Methodology.

Selection and Recruitment Process

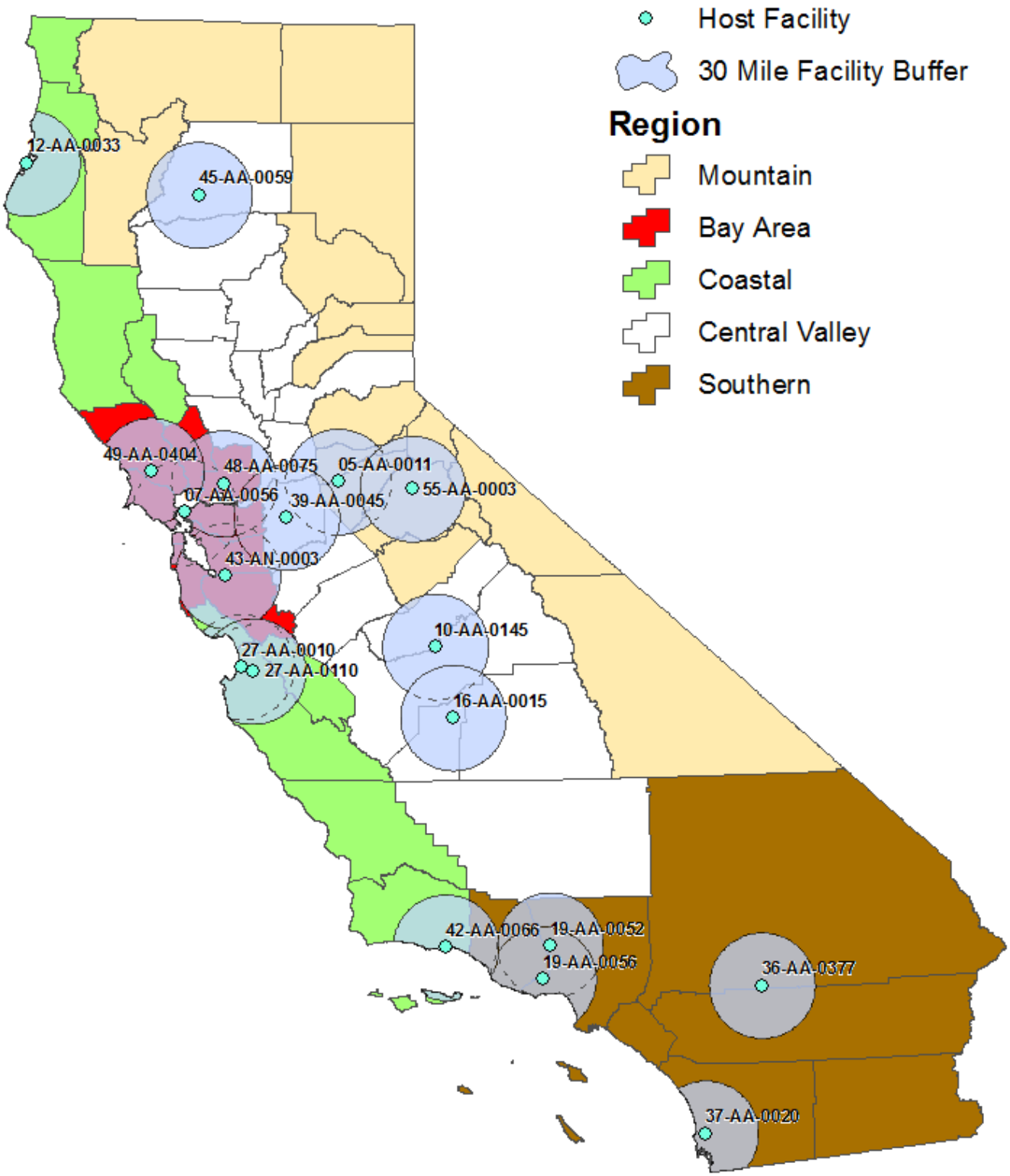
This section details the sorting facility (node) and generator recruitment processes. Node and generator recruitment were interconnected: The project team recruited nodes first, and then recruited generators within 30 miles of each selected node.

Node Recruitment

Since the study involved sampling and sorting of disposed waste, solid waste facilities such as landfills and transfer stations were recruited to be sites where samples could be sorted and disposed. These sites served as the central point, or node, used to define the areas where businesses were recruited. CalRecycle staff used CalRecycle's Solid Waste Information System (SWIS) database to identify potential nodes in each of the study regions that CalRecycle uses for waste characterization studies. The pool of potential nodes included only permitted facilities that accept putrescible solid waste for disposal or transfer/processing. To select nodes for each region and season, staff randomized the list of potential nodes, started recruitment calls at the top of each region's list, and continued until the required number of nodes had been recruited. Except for the Mountain region, the project team recruited one node per region for each of the seasons. Due to the low population and smaller number of businesses in the Mountain region, the project team recruited two nodes for that region and only visited the region during two seasons. A total of 18 nodes were used in the study.

The nodes and regions are mapped in Figure 5 along with their SWIS number and the 30-mile sample area around each node from which generators sites were recruited. See Appendix A: Detailed Methodology for an explanation of how counties were allocated to each region, and the counties included in each region.

Figure 5. Study Regions and Recruitment Nodes



Generator Site Recruitment and Assignment to Tasks

After finalizing the list of nodes participating in the study, the project team generated a list of eligible commercial generator sites using the following steps:

1. Map a 30-mile circle around each selected node.
2. Determine which ZIP codes are wholly or substantially within the node circle.
3. Purchase a list of all businesses (from a private business data clearinghouse) with more than five employees within the included ZIP codes.
4. Randomize the list order, assign each site a unique ID number, and import the organized generator information into the recruitment database.

Since multi-family sites were not included in business databases and lists could not be purchased, the methods for generating a list of eligible multi-family sites were different from the methods for generating a list of eligible businesses. Also, for two seasons, multi-family sites were sampled as part of another study, and the nodes used for that sampling were different. The steps to develop a list of eligible multi-family sites included:

1. Mapping a 30-mile circle around each selected multi-family node,
2. Determining which cities are wholly or substantially within the node circle,
3. Developing a list of all multi-family sites within the included cities using an online Yellow Pages search,
4. Randomizing the list order and assigning each multi-family site a unique ID number, and importing the organized generator information into the recruitment database.

After developing the list of potential sites, the project team recruited generator sites for Task 2 using a two-step process. Step 1 included a phone call to confirm the generator's eligibility, willingness to participate, and contact information. If the recruiter discarded a potential site for any reason during Step 1, the next business on the list for that industry group was contacted. Step 2 included a follow-up phone call to collect the additional information needed to (1) determine how to arrange and conduct visits for data-collection purposes, (2) quantify and characterize disposal and diversion, and (3) correlate disposal and diversion information with other information about the generator (such as number of employees, participation in recycling programs, number of visitors, etc.). The project team repeated these steps until the sampling targets were met. The project team recruited additional businesses as contingencies in the event that a site went out of business, backed out of the study, or was otherwise unavailable for sampling. This contingency was generally equal to about 10 percent of the group target.

The project team randomly selected sites for inclusion in Task 4 from the list of recruited generator sites. These were not additional generators; rather, they were a subset of the generators recruited to participate in Task 2.

Task 3 included a special contamination subsort on a portion of the material types in the study. To select sites for the Task 3 subsort, the project team filtered the list of Task 4 sites to include only generators with curbside recycling or curbside organics service and randomly selected sites from within that filtered list. These sites may also have had Other Diversion, but data for that stream was excluded from this analysis.

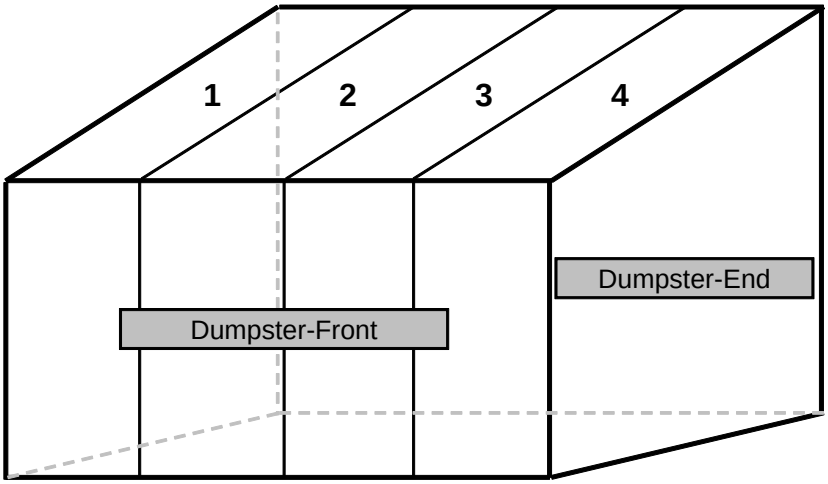
Site Visits

This section provides a description of the fieldwork processes for collecting samples, sorting samples, and quantifying material. The field crew visited each selected site to quantify disposal and diversion, and to collect samples for characterization.

Sample Collection

The field crew collected a sample from a randomly selected vertical cross-section, or "slice," of material from the selected container (see Figure 6). Each sample consisted of all material in the slice, from the top to the bottom of the container. For garbage samples, the field crew ensured that each sample weighed at least 200 pounds. For diversion samples, the field crew collected all material in the container up to 125 pounds.

Figure 6. Example Container with the Slices Illustrated



In cases where the material was inaccessible, unique arrangements were required for the sample collection to proceed. For example, if the site used a compactor, the team provided rolling carts for the businesses to deposit material into for one or more days, instead of into the compactor. The field crew then took material that accumulated in the rolling containers as the sample.

For garbage samples, the field crew contained the collected sample to prevent cross-contamination with other samples, labeled it with relevant details about its source using a sample placard, and transported it to the local node for sorting. Diversion samples were sorted on-site, and materials were returned to the containers.

Collect Disposal Quantity Information

While on-site at each business, the field crew recorded the volume of waste in each container or collection area. We used this information to calculate annual disposed waste tonnage for each business and extrapolated these results for each industry group. The procedure for measuring waste during the site visit is described below. The field crew recorded this information on paper forms for later entry into the centralized generator database.

- **Disposed Waste Volume Measurements:** The field crew recorded the length, width, and height to the nearest inch for all disposed waste at each site. The volume of the disposed waste at each site was the sum of all volumes for each waste container or collection area (if there was more than one), in cubic inches.
- **Disposed Waste Accumulation Time:** During initial recruitment screening calls, recruiters asked the responsible party at the site for information to determine waste accumulation time, including the business operating hours, the time the waste containers were last collected by the hauler (or regular collection schedule), and when trash is regularly taken outside to dumpsters. While on-site, the field crew verified this critical information.

Collect Curbside Diversion Quantity Information

While on-site, the field crew collected information about the amount of materials collected in recycling and organics containers. We used this as well as other information to calculate annual recycling and diversion quantities for each business. The procedure for measuring materials during the site visit is described below. The field crew recorded this information on paper forms for later entry into the centralized recruitment database.

- **Diverted Material Volume Measurements:** The field crew recorded the length, width, and height to the nearest inch for all material in recycling and organics containers at each site. The volume of the diverted material at each site was the sum of all volumes for each container (if there was more than one container on-site), in cubic inches.
- **Diverted Material Accumulation Time:** During initial recruitment screening calls, recruiters asked the responsible party at the site for information to determine diverted material accumulation time, including the business operating hours, the time the containers were last collected by the hauler (or regular collection schedule), and when material is regularly taken to outside containers. While on-site, the field crew verified this critical information.

Collect Other Diversion Quantity Information

The field crew confirmed additional diversion practices (such as back-hauling, self-hauling, source reduction, and reuse) data during the same visit where they sampled, sorted, and quantified the curbside diversion streams.

The recruitment staff collected information about the site's other diversion practices that the field crew reviewed before they arrived at a site for the diversion assessment. At each site, the field crew met with key personnel to discuss other diversion practices and obtain any records or estimates necessary to quantify other diversion practices. The intent of these meetings was to verify quantity data and other information about diversion activities that the sampling and sorting of materials collected on site did not capture. The following scenarios illustrate some examples of quantifying other diversion:

- **Scenario 1:** A business back-hauls pallets to a central distribution facility for reuse. The field crew first asked the facility personnel if they could provide records regarding the number of pallets reused. If not, the field crew weighed the pallets on-site and correlated that information with the time elapsed since the last back-haul to estimate the annual quantity of pallets reused.
- **Scenario 2:** A business donates food to the local food bank. The field crew first asked the facility personnel if they could provide records regarding the quantity of food donated. If not, the field crew weighed the quantity of food set aside for donation and correlated that information with the time elapsed since the last donation to estimate the annual quantity of food donated.
- **Scenario 3:** A business bales cardboard and self-hauls the material to a local paper pulper. The field crew first asked the facility personnel if they could provide records regarding the number of bales sold. If not, the field crew weighed a bale, multiplied that weight by the number of bales on-site, and correlated that information with the time elapsed since the last haul to estimate the annual quantity of baled cardboard sold.

Other diversion quantity estimates were based on actual receipts or freight documents whenever possible.

During the site visit, the field crew also collected quantity information for any diversion not reported to the recruiters.

Sorting Procedures

The sorting process for disposal and diversion samples was the same except that samples from each task were sorted in different locations: garbage samples at the local node and diversion samples on-site at each business or multi-family site. After selecting and measuring the volume of each sample, the field crew photographed the sample; sorted the sample into 82 material types; weighed the material in each category; and recorded the weights. The full list of material definitions is included in Appendix B: Material Definitions.

For a portion of the sites included in the Task 3 analysis, both the disposed material stream samples and the curbside diversion stream samples were sorted to a more detailed list. After the field crew sorted these samples into the 82 material types, they further sorted 20 of the material types into three contamination categories: clean, bin-contaminated, or source-contaminated. The definition for each contamination category

is included at the end of Appendix B: Material Definitions. The 20 materials included in the more detailed sort are listed in Table 26.

Table 26. Materials Included in the Contamination Subsort

Paper	Metal
Uncoated Corrugated Cardboard	Tin/Steel Cans - CRV Bimetal Containers
Paper Bags	Tin/Steel Cans - Other
Newspaper	Aluminum Cans - CRV
White Ledger	Aluminum Cans - Non-CRV
Other Office Paper	**Plastic**
Other Miscellaneous Paper - Compostable	PETE Containers - CRV
Other Miscellaneous Paper - Other	PETE Containers - Non-CRV
Remainder/Composite Paper - Rigid Food and Beverage Cartons	HDPE Containers - CRV
Remainder/Composite Paper - Compostable	HDPE Containers - Non-CRV
Remainder/Composite Paper - Other	Miscellaneous Plastic Containers (#3-&7) - CRV
	Miscellaneous Plastic Containers (#3-&7) - Non-CRV

Changes in Methods from Original Design

The project team made several adjustments to the original study design to address unforeseen circumstances that arose over the course of this study.

Many sites did not dispose of 200 pounds of garbage over a regular collection cycle, so the field crew had to make multiple visits to each site. We limited disposal sample weights to the amount of material collected in three visits for the Bay Area, Southern, and Central Valley regions, and two visits in the Coastal and Mountain regions. If after two or three visits (depending on the region) the field crew had not collected 200 pounds, the sample was considered complete regardless of the sample weight. The field crew typically had more sites to visit in the Bay Area, Southern, and Central Valley regions and consequently spent more consecutive days working in these regions during sampling periods. Sites in these regions were visited three times instead of two because the longer fieldwork period in these regions facilitated more visits.

Node facilities were recruited far in advance of fieldwork to allow time for the generator site recruitment. Over the intervening period between node recruitment and fieldwork, several of the originally recruited nodes either changed their minds about hosting or for other reasons were not able to host the field sorting. In those cases, the recruitment team selected a nearby facility to host the field crew, even though the generator recruitment was centered around the original node.

The project team intended to characterize all disposed samples from multi-family generators in a separate disposal facility-based study. However, after the first two seasons, the disposed multi-family samples were collected and sorted by the Task 2 field crew. This change was made to better accommodate the contamination subsorts necessary for the Task 3 analysis.

The calculation methods used to quantify and characterize the Other Diversion stream were modified to better accommodate the wide range of data collected in the field for this stream.

Study Results

This section presents the findings for each industry group and for all industry groups combined (the overall commercial sector), and multi-family. Tables and figures in this section refer to the four material streams: Disposed, Curbside Recycle, Curbside Organics, and Other Diversion. Streams are defined at the container level and include all materials placed in the container, whether they "should" be there or not. For example, all material in a curbside recycling container will be processed at a MRF, regardless of whether that material is actually recoverable, and all materials in a disposal bin will be disposed, including recyclables. The Other Diversion stream includes materials recovered apart from the curbside streams.

Results include findings for the quantities of materials in each stream, the rates at which they are produced, and overall densities for each stream. Also presented are the composition of materials in each of the four streams, recoverability of materials in each stream, and overall recoverability of all materials generated (all streams combined).

The 82 material types have been aggregated into five recoverability groups: **Curbside Recyclable, Compost/Mulch, Other Recyclable, Recoverable Inerts,** and **Other Materials**. The recoverability groups are defined at the material level, i.e. materials in the **Curbside Recyclable** group are materials that most MRFs could recover and sell.

For the purposes of this study, we have defined the recoverability group as follows:

- **Curbside Recyclable:** materials that most Material Recovery Facilities (MRFs) collect, bale, and market.
- **Compost/Mulch:** materials that fall under AB 1826, California's Mandatory Commercial Organics Recycling law.
- **Other Recyclable:** materials that are readily recyclable but usually not accepted in a curbside recycling program. These materials are often collected at drop-off locations.
- **Recoverable Inerts:** recoverable inert construction and demolition debris.
- **Other Materials:** all materials that do not fit in one of the other groups.

Materials from any recoverability group can be found in any stream. **Curbside Recyclable** materials are frequently found in the Disposed stream (businesses frequently throw away cardboard and aluminum cans) and **Other Materials** are frequently found in the Curbside Recycle stream (businesses frequently put hardcover books and broken drinking glasses in their recycling bin). A detailed list of the materials included in each recoverability group can be found in Appendix B: Material Definitions.

Throughout the report, recoverability groups are referenced with **bold text** (e.g. **Recoverable Inerts)**, and individual material types are referenced with *italics* (*uncoated corrugated cardboard*, for example).

Rate and Density Findings

Tables and figures in this section summarize the quantity information for each group and for the commercial sector overall. Quantities disposed, diverted, and generated have been normalized on a per employee basis (or on a per occupied unit basis for multi-family). Normalizing the quantities facilitates comparisons between the various industry groups.

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

To keep tables and figures readable, estimated rates are rounded to two decimal points, and density is rounded to the nearest whole number. Due to this rounding, the data presented, when added together, may not exactly match the subtotals and totals shown.

It is important to recognize that the data presented in the tables were calculated using unrounded numbers. Therefore, using the rounded values shown in the tables in calculations will yield quantities that are different than those shown. Values of less than 0.005 are shown as 0.00.

Statewide, businesses disposed of approximately 1.13 tons per employee per year (TPEPY) and diverted another 0.64 TPEPY. In total, businesses across the state generated an estimated 1.77 TPEPY. Based on these findings, the commercial diversion rate was estimated to be 36 percent. Diversion was broadly defined to include any activity that avoids disposing of waste (including reuse, when it can be quantified). The majority of commercial diversion was in the Other Diversion stream, most frequently cardboard that was diverted via back-hauling or sales directly into the commodity market. The overall commercial sector TPEPY does not include the findings from multi-family properties.

Retail Trade – Food and Beverage Stores (Group 11) had the highest generation rate of all industry groups (6.64 TPEPY) and the greatest estimated diversion rate (82 percent). Both of those metrics are due to the large quantity of *uncoated corrugated cardboard* and *food* in the Other Diversion stream. Group 11 is mostly composed of grocery stores.

The Arts, Entertainment, and Recreation group (Group 1) and Durable Wholesale and Trucking (Group 2) had the next two highest generation rates (3.08 TPEPY and 2.99 TPEPY, respectively). Durable Wholesale and Trucking (Group 2) also had the next highest diversion rate (80 percent). The high generation rate and diversion rate for Group 2 were largely due to high Other Diversion rates for sites in this group. Group 2 businesses diverted large quantities of *uncoated corrugated cardboard* and scrap metal. The high generation rate for Group 1 was mostly due to the high Disposed TPEPY for this group (the highest in the study). The high Disposed TPEPY in Group 1 can be partly attributed to the fact both employees and large numbers of visitors and guests were generating material at these sites. Group 1 included live performance venues, parks, fairgrounds, bowling alleys, movie theaters, and stadiums. Group 2 was mostly composed of businesses warehousing and shipping durable consumer goods (items generally with a normal life expectancy of three years or more) such as motor vehicles,

furniture, construction materials, machinery and equipment (including household-type appliances), sporting goods, toys, and hobby goods.

The Public Administration group (Group 9) had the second-lowest Disposed TPEPY (0.32 TPEPY) and the lowest generated TPEPY (0.39 TPEPY) of all groups. Group 9 included all public sector sites, such as local government buildings and police and fire stations, but it did not include schools (public or private). The diversion rate for Group 9 was 16 percent.

The Medical and Health group (Group 8) had the lowest diversion rate of the studied groups (9 percent). This was likely due to a combination of the types of materials generated (such as patient gowns, tubing, and gloves) that could not be recovered and privacy policies that reduced the recovery of paper.

Multi-family properties disposed of an estimated 0.74 tons per occupied unit per year (TPUPY) and generated an estimated 0.87 TPUPY. None of the multi-family units visited had materials in the Other Diversion stream. Multi-family estimates did not take into account any diversion (e.g., recycling of computer equipment, furniture, etc.) done by tenants of the multi-family complex independently of the buildings' management and custodial services. The estimated diversion rate for the multi-family group was 15 percent.

Table 27 presents TPEPY results by industry group and for the overall commercial sector, and multi-family. The TPEPY was calculated for each industry group as a weighted average of the TPEPY at large businesses and the TPEPY at small businesses in that group. The calculations are detailed in Appendix C: Description of Calculations.

Table 27. Generation Rate Summary by Weight, by Group (TPEPY)

Group Number and Name		Tons per Employee per Year					Diversion Rate
		Disposed	Curbside Recycle	Curbside Organics	Other Diversion	Generation	
Overall Commercial Sector		**1.13**	**0.14**	**0.12**	**0.39**	**1.77**	**36%**
1	Arts, Entertainment, & Recreation	2.56	0.17	0.03	0.33	**3.08**	17%
2	Durable Wholesale & Trucking	0.60	0.17	0.00	2.23	**2.99**	80%
3	Education	0.43	0.05	0.01	0.02	**0.50**	15%
4	Hotels & Lodging	1.72	0.22	0.01	0.18	**2.14**	20%
5	Manufacturing - Electronic Equipment	0.31	0.07	0.00	0.36	**0.75**	58%
6	Manufacturing - Food & Nondurable Wholesale	1.28	0.05	0.01	0.51	**1.85**	31%
7	Manufacturing - All Other	0.45	0.10	0.00	0.94	**1.50**	70%
8	Medical & Health	0.67	0.05	0.01	0.01	**0.74**	9%
9	Public Administration	0.32	0.04	0.00	0.02	**0.39**	16%
10	Restaurants	2.40	0.26	0.17	0.08	**2.92**	18%
11	Retail Trade - Food & Beverage Stores	1.21	0.15	0.13	5.15	**6.64**	82%
12	Retail Trade - All Other	2.14	0.10	0.00	0.17	**2.41**	11%
13	Services - Management, Administrative, Support, & Social	0.74	0.11	0.57	0.02	**1.44**	48%
14	Services - Professional, Technical, & Financial	1.86	0.32	0.08	0.04	**2.31**	19%
15	Services - Repair & Personal	0.94	0.15	0.24	0.18	**1.50**	38%
16	Not Elsewhere Classified	0.50	0.05	0.01	0.64	**1.20**	58%
17	**Multifamily***	**0.74**	**0.13**	**0.00**		**0.87**	**15%**

**Multifamily is reported in tons per unit per year*

Using the data collected during the site visits, the project team also calculated the annual volume of material disposed and diverted through curbside programs at each generator. These annual volumes were then normalized on a per employee basis to estimate the Cubic Yards Per Employee Per Year (YPEPY). At many generator sites, the annual quantities of Other Diversion materials were based on records provided by the business instead of direct measurements of material in containers. For this reason, the YPEPY cannot be calculated for the Other Diversion stream.

Businesses across the state disposed of an estimated 16.4 YPEPY and diverted approximately 6.4 YPEPY through curbside programs. Retail Trade – All Other (Group 12) had the greatest Disposed YPEPY at 31.1 YPEPY, and Public Administration (Group 9) had the lowest, with slightly more than 5 YPEPY. Restaurants (Group 10) had the highest combined Disposed and curbside diversion, with 40.9 YPEPY.

Table 28 presents yards per employee per year results by industry group, for the overall commercial sector, and for multi-family generator sites. The YPEPY was calculated for each industry group as a weighted average of the YPEPY at large businesses and the YPEPY at small businesses in that group. The calculations are detailed in Appendix C: Description of Calculations.

Table 28. Generation Rate Summary by Volume, by Group (YPEPY)

Group Number and Name		Cubic Yards per Employee per Year			
		Disposed	**Curbside Recycle**	**Curbside Organics**	**Curbside Total**
Overall Commercial Sector		**16.36**	**4.72**	**1.72**	**22.81**
1	Arts, Entertainment, & Recreation	24.34	7.37	0.48	**32.19**
2	Durable Wholesale & Trucking	12.29	2.60	0.00	**14.89**
3	Education	6.83	2.48	0.16	**9.47**
4	Hotels & Lodging	25.80	5.49	0.23	**31.52**
5	Manufacturing - Electronic Equipment	7.06	2.89	0.00	**9.95**
6	Manufacturing - Food & Nondurable Wholesale	16.19	1.83	0.14	**18.16**
7	Manufacturing - All Other	10.49	3.16	0.00	**13.64**
8	Medical & Health	12.04	3.08	0.12	**15.23**
9	Public Administration	5.21	1.54	0.08	**6.83**
10	Restaurants	30.01	9.99	0.91	**40.91**
11	Retail Trade - Food & Beverage Stores	24.92	8.20	1.81	**34.93**
12	Retail Trade - All Other	31.14	7.22	0.00	**38.36**
13	Services - Management, Administrative, Support, & Social	13.11	3.10	9.42	**25.63**
14	Services - Professional, Technical, & Financial	20.44	7.62	1.57	**29.63**
15	Services - Repair & Personal	22.80	7.25	0.00	**30.05**
16	Not Elsewhere Classified	10.38	2.38	0.17	**12.92**
17	**Multifamily***	**15.50**	**5.09**	**0.04**	**20.63**

**Multifamily is reported in cubic yards per unit per year*

Table 29 provides density summaries for the Disposed, Curbside Recycle, and Curbside Organics streams, by industry group and for the overall commercial sector, and multi-family. The density was calculated based on the estimated annual volume and annual weight of materials at the study sites and excludes sites with compactors. The project team could not calculate densities for the Other Diversion stream because most Other Diversion stream samples did not have volumes associated with them. The density was calculated for each industry group as a weighted average of the density at large businesses and the density at small businesses in that group. Many industry groups (for example, Durable Wholesale & Trucking) did not have curbside compost at any of the sampled generator sites. For those groups, the curbside organics density is blank. The calculations are detailed in Appendix C: Description of Calculations.

Table 29. Density Summary, by Group

Group Number and Name		Pounds per Cubic Yard		
		Disposed	Curbside Recycle	Curbside Organics
Overall Commercial Sector		**138**	**58**	**135**
1	Arts, Entertainment, & Recreation	153	47	108
2	Durable Wholesale & Trucking	77	31	
3	Education	124	37	99
4	Hotels & Lodging	120	65	258
5	Manufacturing - Electronic Equipment	70	49	
6	Manufacturing - Food & Nondurable Wholesale	107	52	176
7	Manufacturing - All Other	90	50	
8	Medical & Health	112	35	32
9	Public Administration	113	59	118
10	Restaurants	152	53	396
11	Retail Trade - Food & Beverage Stores	103	40	118
12	Retail Trade - All Other	146	27	
13	Services - Management, Administrative, Support, & Social	108	73	109
14	Services - Professional, Technical, & Financial	180	90	82
15	Services - Repair & Personal	81	41	
16	Not Elsewhere Classified	88	40	105
17	**Multifamily**	**95**	**51**	**195**

Different types of businesses generate different types of materials. A business' waste generation pattern, waste management practices, and the prevalence of that business type in California have an effect on the overall commercial sector waste stream. The following are highlights for several of the largest industry groups.

The Services – Professional, Technical, and Financial group accounted for approximately 19 percent of the overall commercial sector generation, making it the largest generator in the state. This group also employs the most people in California. Examples of business types in this group include banks, real estate agencies, architecture firms, and engineering companies. The majority of generation in this group is in the Disposed stream—materials that are disposed directly from the businesses without further significant recovery.

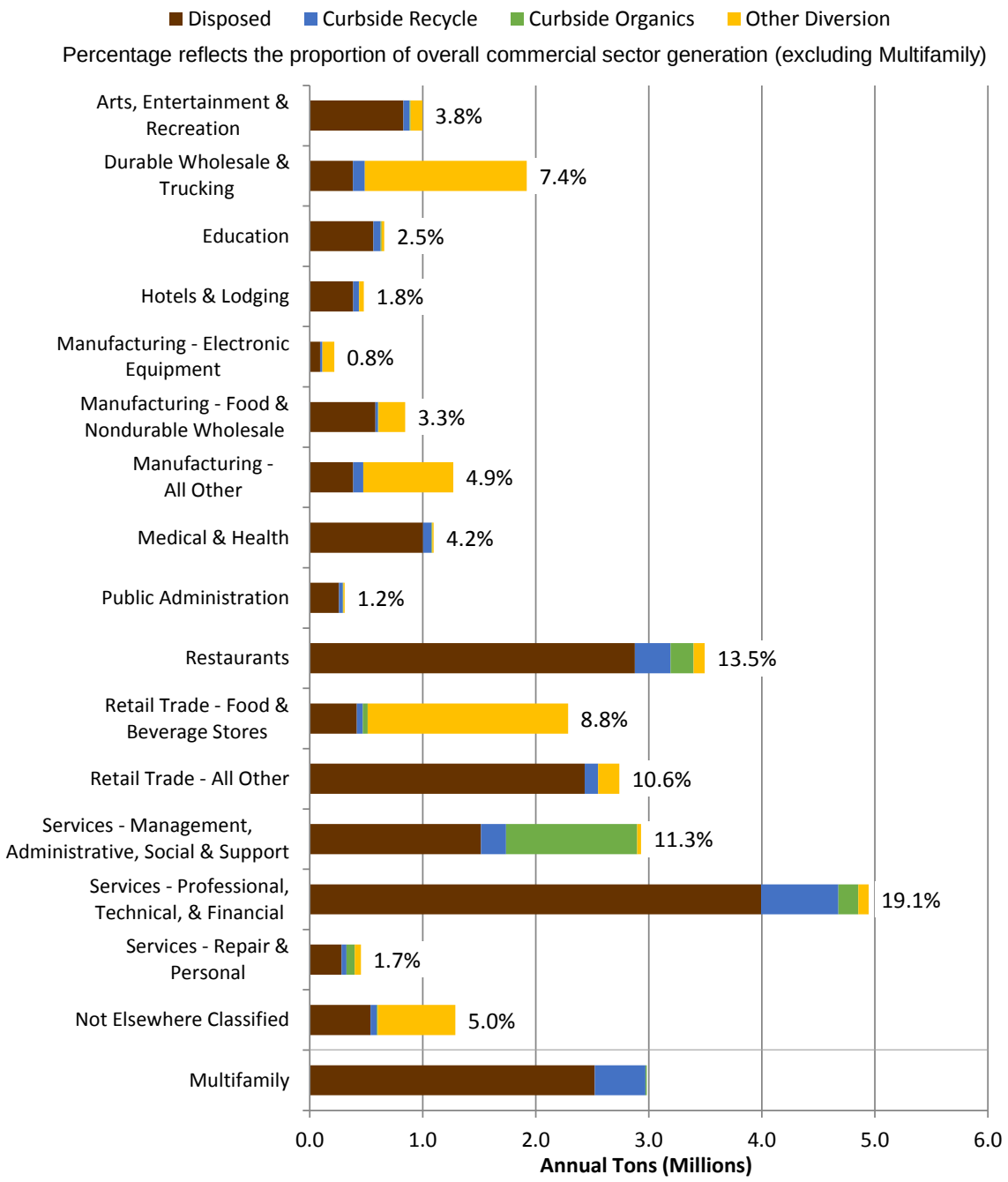
At nearly 14 percent of overall generation, Restaurants is the second-largest industry group in the study on the basis of tons generated. The Disposed waste stream is the largest part of Restaurants generation. Although more and more restaurants are participating in food diversion programs, food is the most prevalent divertible material type in the Restaurants' Disposed waste.

Services – Management, Administrative, Social, and Support and Retail Trade – All Other are the only other groups to generate more than 10 percent of the overall commercial sector waste. These two groups have very different total generation composition profiles. The Disposed stream accounted for nearly 90 percent of the Retail Trade – All Other generation, but that proportion was approximately 52 percent in the Services – Management, Administrative, Social and Support group.

Manufacturing – Electronic Equipment accounted for less than 1 percent of the overall commercial sector generation, making it the smallest group (by generation) in the state. Manufacturing – Electronic Equipment includes businesses manufacturing physical goods such as computers, radios, computing and memory chips, transformers, electrical appliances, and batteries, but it does not include software developers.

Figure 7 summarizes the annual generation by material stream for each industry group and the multi-family group. The percentages reflect that group's proportion of total commercial sector generation (nearly 26 million tons), excluding the multi-family group.

Figure 7. Annual Generation for Industry Groups, by Stream



Services – Professional, Technical, and Financial was the largest group in the state, by employment, and disposed of more material, by weight, than any other group. Among all the industry groups, Retail Trade – Food and Beverage Stores diverted the most material, by weight. Hotels and Lodging had the fewest employees among the industry groups studied. Table 30 ranks all industry groups according to statewide employment, tons disposed, tons diverted, and tons generated.

Table 30. Rankings, by Group

	Statewide Employment*	% of Statewide Employment	Rank by Employment	Tons Disposed	% of Comm. Disposal	Rank by Tons Disposed	Tons Diverted	% of Comm. Diversion	Rank by Tons Diverted	Tons Generated	% of Comm. Generation	Rank by Tons Generated	Diversion Rate
Arts, Entertainment, & Recreation	324,080	2%	13	829,661	5%	6	168,036	2%	11	**997,697**	4%	10	17%
Durable Wholesale & Trucking	641,600	4%	10	381,767	2%	13	1,538,803	16%	2	**1,920,570**	7%	6	80%
Education	1,317,936	9%	4	562,442	3%	8	97,926	1%	13	**660,368**	3%	12	15%
Hotels & Lodging	222,871	2%	16	384,327	2%	11	93,712	1%	14	**478,039**	2%	13	20%
Manufacturing - Electronic Equipment	290,224	2%	15	91,265	1%	16	125,666	1%	12	**216,931**	1%	16	58%
Manufacturing - Food & Nondurable Wholesale	456,830	3%	11	582,486	4%	7	261,646	3%	9	**844,131**	3%	11	31%
Manufacturing - All Other	846,906	6%	8	384,292	2%	12	885,586	9%	5	**1,269,878**	5%	8	70%
Medical & Health	1,491,950	10%	3	1,003,316	6%	5	93,629	1%	15	**1,096,945**	4%	9	9%
Public Administration	802,458	5%	9	259,137	2%	15	50,354	1%	16	**309,491**	1%	15	16%
Restaurants	1,197,110	8%	5	2,876,653	17%	2	617,826	7%	7	**3,494,479**	13%	2	18%
Retail Trade - Food & Beverage Stores	344,256	2%	12	417,791	3%	10	1,868,403	20%	1	**2,286,193**	9%	5	82%
Retail Trade - All Other	1,137,123	8%	6	2,433,989	15%	3	306,012	3%	8	**2,740,001**	11%	4	11%
Services - Management, Administrative, Support, & Social	2,034,556	14%	2	1,514,667	9%	4	1,417,462	15%	3	**2,932,129**	11%	3	48%
Services - Professional, Technical, & Financial	2,141,914	15%	1	3,994,643	24%	1	949,869	10%	4	**4,944,512**	19%	1	19%
Services - Repair & Personal	300,627	2%	14	281,371	2%	14	170,866	2%	10	**452,237**	2%	14	38%
Not Elsewhere Classified	1,077,373	7%	7	538,858	3%	9	750,291	8%	6	**1,289,149**	5%	7	58%
Overall Commercial Sector	**14,627,814**	**100%**		**16,536,664**	**100%**		**9,396,087**	**100%**		**25,932,751**	**100%**		**36%**

*Employment based on 2013 data provided by CalRecycle

Notes for the Composition and Quantity Findings

This section of the report presents the composition and quantity data for the overall commercial sector and each of the industry groups separately, and multi-family. Overall findings for each group are presented in five ways:

1. A table summarizing the key findings and metrics for the industry group, including disposed TPEPY, diverted TPEPY, disposed tons, diverted tons, diversion rate, and the three most prevalent divertible materials (by weight) in the disposed stream.
2. A bar chart summarizing the quantity and proportion of material generated by each material stream.
3. A bar chart that breaks down the composition of materials in each stream, according to potential recoverability.
4. A bar chart summarizing how much of all materials generated fall into each recoverability group. This includes all streams combined—both materials currently diverted and divertible materials placed in the Disposed stream.
5. A table detailing the quantity and composition for each stream. The detailed table aggregates the 82 material types used for sorting into 68 material types for reporting. Appendix B: Material Definitions includes a summary of how materials are aggregated from the 82 types down to 68 types. Appendix E: Detailed Composition Tables shows data for all streams according to the 82 detailed types, including error ranges. These tables also include data for California Redemption Value (CRV) materials.

Note: Estimates of the amount of contamination in recycling and organics bins are included. For this study, contamination in a bin consisted of materials not generally accepted in curbside recycling or organics programs, as listed in Table 95 of Appendix B: Material Definitions. Materials accepted in local programs may differ from this list.

Rounding

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

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

It is important to recognize that the quantities presented in the tables were calculated using unrounded percentages. Therefore, using the rounded percentages shown in the tables to calculate quantities will yield quantities that are different than those shown in the report.

For example, the rounded percentage for Disposed *food* in Table 32 is shown as 24.4 percent, but the unrounded number used in calculations was 24.4048519294363 percent. If the rounded percentage for Disposed *food* in Table 32 were used to calculate the tonnage, it would yield the following: 24.4 percent x 16,536,664 (the rounded Disposal tonnage) = 4,034,946 tons. However, if the more precise percentage for this material is used, it yields the following: 24.4048519294363 percent multiplied by 16,536,663.65 (the unrounded tonnage) = 4,035,748.27688004 tons, or 4,035,748 tons when rounded to the nearest ton. Using unrounded instead of rounded numbers in the calculations results in a difference of more than 800 tons. The more precise tonnage of 4,035,748 is shown in the table.

Findings for the Overall Commercial Sector

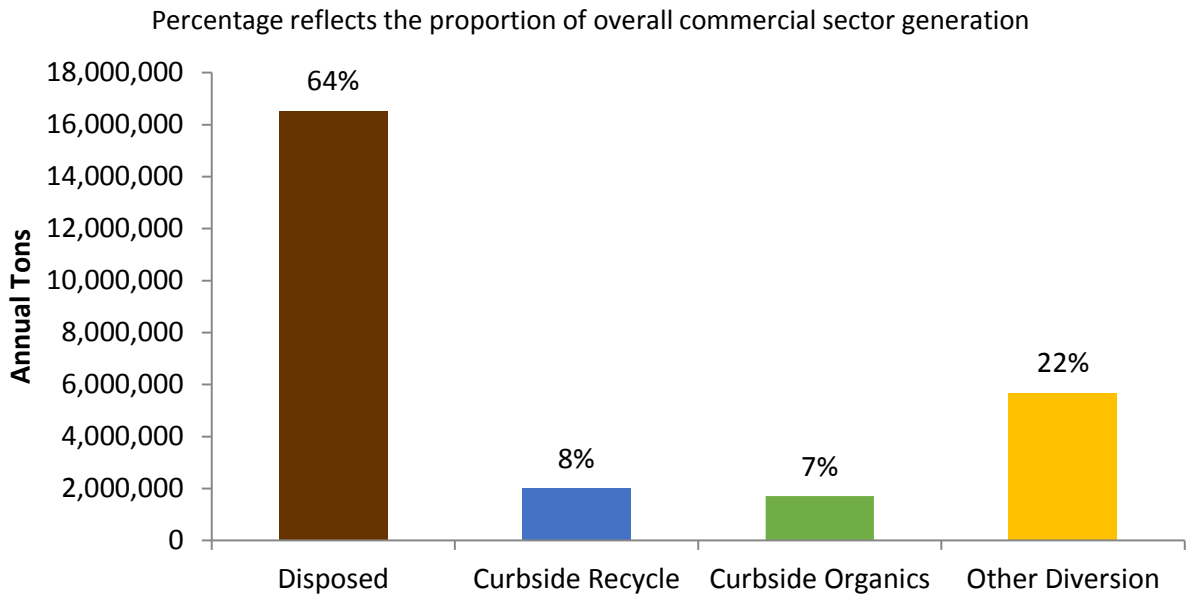
This section summarizes the results for samples from all business generator sites. The results exclude data collected at the multi-family sites. Statewide, the commercial sector disposes of more than 16.5 million tons and diverts nearly 9.4 million tons. Based on these findings, the commercial diversion rate was estimated to be 36 percent. Diversion was broadly defined to include any activity that avoids disposing of waste (including reuse, when it can be quantified). The majority of commercial diversion was in the Other Diversion stream, most frequently cardboard that was diverted via back-hauling or sales directly into the commodity market. The overall commercial sector TPEPY does not include the findings from multi-family properties. Total generation was approximately 1.77 TPEPY. *Food* was the most prevalent divertible material type in the overall commercial sector Disposed stream, accounting for 24 percent of disposal. Table 31 summarizes the key findings for the overall commercial sector.

Table 31. Key Findings and Metrics: Overall Commercial Sector

Overall Commercial Sector				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.13	0.64	16,536,664	9,396,087	36%
Top Three Diversion Opportunities in Disposed Stream				
• Food (24%, 4,035,748 tons) • Remainder/Composite Paper - Compostable (10%, 1,673,592 tons) • Clean Pallets & Crates (4%, 735,005 tons)				

Figure 8 presents the annual tons for each stream in the overall commercial sector. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams, such as food in recycling bins or glass in organics bins. As shown, almost two-thirds of total generation at businesses went to the Disposed stream, and the remaining one-third was in the diversion streams.

Figure 8. Annual Tons by Waste Stream: Overall Commercial Sector



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 9 breaks down the potential recoverability (by recoverability group) for each stream in the overall commercial sector. As shown, **Compost/Mulch** accounted for almost half of the Disposed stream. The Other Diversion stream was nearly evenly split between **Curbside Recyclable**, **Compost/Mulch**, and **Other Recyclable** materials. Figure 9 illustrates that recyclable materials were found in the Disposed stream and that materials not usually recovered ("**Other Materials**") were indeed recovered by some businesses. In fact, materials of all recoverability types were found in all streams.

The overall commercial sector Curbside Recycle contamination rate was 16 percent, and the Curbside Organics contamination rate was 2 percent.

Figure 9. Recoverability by Stream: Overall Commercial Sector

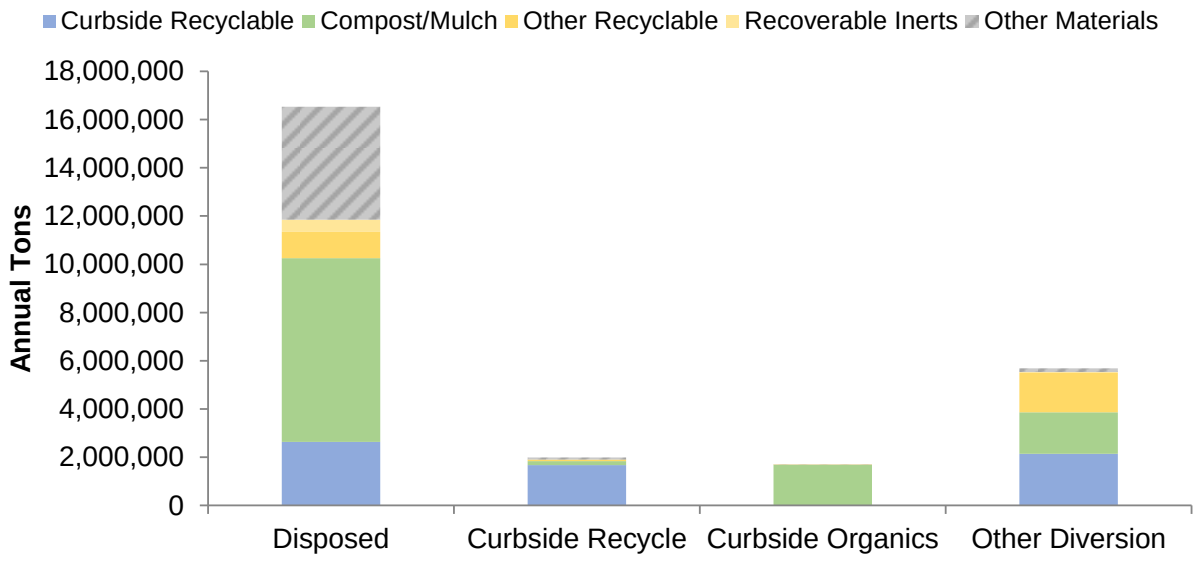


Figure 10 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 10 illustrates, approximately 43 percent of total generation in the overall commercial sector was material in the **Compost/Mulch** recoverability group, and approximately 25 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 81 percent of the overall commercial sector generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 10. Recoverability of Materials Generated in the Overall Commercial Sector

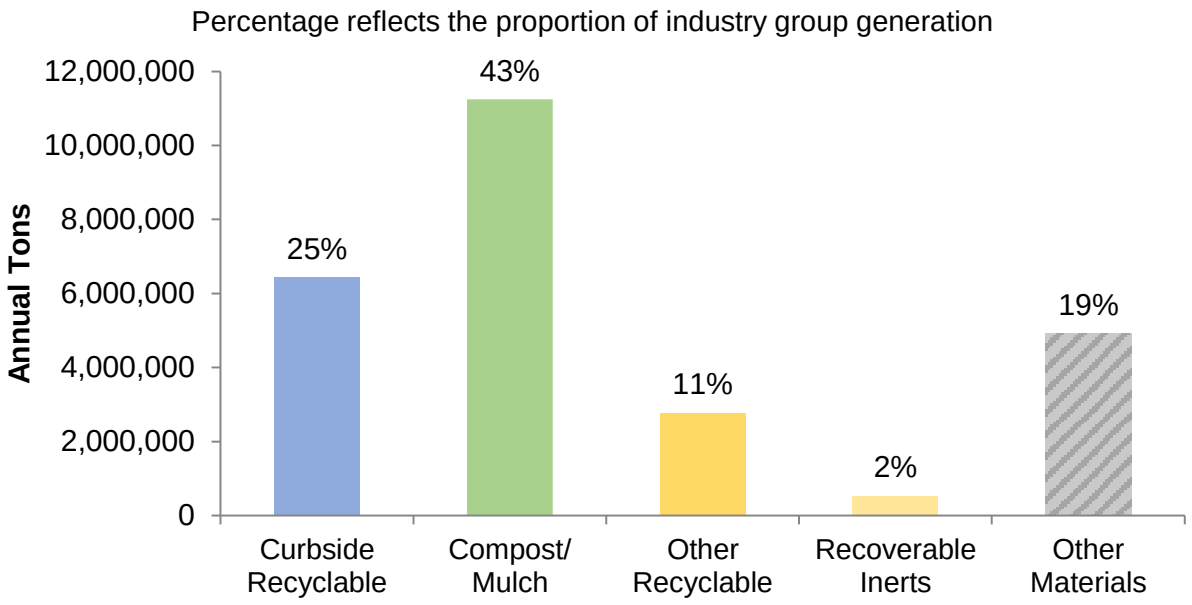


Table 32 presents detailed overall commercial sector composition results for each stream as well as for the total generation.

Table 32. Composition Summary: Overall Commercial Sector

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**26.7%**	**4,415,748**	**78.6%**	**1,573,662**	**1.1%**	**18,057**	**36.1%**	**2,052,884**	**31.1%**	**8,060,351**
Uncoated Corrugated Cardboard	3.0%	494,244	51.2%	1,024,317	0.2%	3,198	31.6%	1,800,463	12.8%	3,322,222
Paper Bags	0.4%	62,235	0.6%	12,318	0.0%	39	0.0%	296	0.3%	74,889
Newspaper	2.0%	337,096	1.9%	38,121	0.1%	857	0.0%	2,096	1.5%	378,170
White Ledger Paper	1.6%	268,245	6.4%	127,555	0.0%	48	0.6%	34,770	1.7%	430,618
Other Office Paper	1.8%	293,207	4.8%	95,814	0.0%	414	0.3%	16,999	1.6%	406,435
Magazines and Catalogs	0.7%	115,761	3.7%	74,131	0.0%	0	0.0%	1,966	0.7%	191,859
Phone Books and Directories	0.0%	5,777	0.0%	957	0.0%	0	0.0%	140	0.0%	6,874
Other Miscellaneous Paper - Compostable	0.5%	77,929	2.8%	56,269	0.5%	7,988	0.1%	3,226	0.6%	145,411
Other Miscellaneous Paper - Other	3.0%	493,669	5.3%	105,709	0.0%	622	3.1%	178,968	3.0%	778,968
Remainder/Composite Paper - Compostable	10.1%	1,673,592	0.8%	16,981	0.2%	3,978	0.2%	12,989	6.6%	1,707,540
Remainder/Composite Paper - Other	3.6%	593,991	1.1%	21,490	0.1%	914	0.0%	970	2.4%	617,365
Glass	**2.0%**	**329,185**	**5.2%**	**104,797**	**0.8%**	**13,898**	**1.4%**	**80,370**	**2.0%**	**528,250**
Clear Glass Bottles and Containers	0.9%	143,197	2.5%	50,649	0.3%	5,051	0.4%	21,140	0.8%	220,037
Green Glass Bottles and Containers	0.4%	61,533	1.8%	36,710	0.4%	7,325	0.3%	16,192	0.5%	121,759
Brown Glass Bottles and Containers	0.2%	40,146	0.8%	15,677	0.1%	1,522	0.8%	43,032	0.4%	100,377
Other Glass Colored Bottles and Containers	0.0%	1,091	0.0%	305	0.0%	0	0.0%	0	0.0%	1,395
Flat Glass	0.2%	32,008	0.0%	6	0.0%	0	0.0%	0	0.1%	32,014
Remainder/Composite Glass	0.3%	51,210	0.1%	1,450	0.0%	0	0.0%	7	0.2%	52,667
Metal	**3.6%**	**601,182**	**1.6%**	**32,370**	**0.1%**	**1,117**	**29.6%**	**1,685,302**	**8.9%**	**2,319,971**
Tin/Steel Cans	0.5%	81,495	0.8%	16,866	0.0%	639	0.1%	3,263	0.4%	102,263
Major Appliances	0.0%	5,239	0.0%	0	0.0%	0	0.0%	0	0.0%	5,239
Used Oil Filters	0.0%	1,742	0.0%	0	0.0%	0	0.0%	0	0.0%	1,742
Other Ferrous	0.9%	153,526	0.3%	5,409	0.0%	55	22.9%	1,302,028	5.6%	1,461,018
Aluminum Cans	0.2%	27,497	0.3%	5,381	0.0%	84	0.1%	7,432	0.2%	40,394
Other Non-Ferrous	0.7%	121,719	0.2%	3,278	0.0%	334	4.4%	251,361	1.5%	376,693
Remainder/Composite Metal	1.3%	209,964	0.1%	1,436	0.0%	4	2.1%	121,218	1.3%	332,622
Electronics	**0.8%**	**131,818**	**0.1%**	**2,401**	**0.0%**	**13**	**1.2%**	**68,519**	**0.8%**	**202,751**
Brown Goods	0.2%	32,602	0.0%	0	0.0%	0	0.0%	1,689	0.1%	34,291
Computer-related Electronics	0.0%	4,772	0.1%	1,853	0.0%	0	1.1%	63,018	0.3%	69,644
Other Small Consumer Electronics	0.0%	3,877	0.0%	548	0.0%	13	0.0%	137	0.0%	4,575
Video Display Devices	0.5%	90,567	0.0%	0	0.0%	0	0.1%	3,675	0.4%	94,241
Plastic	**12.9%**	**2,131,488**	**8.7%**	**173,986**	**0.2%**	**3,795**	**0.8%**	**45,584**	**9.1%**	**2,354,854**
PETE Plastic Containers	0.5%	90,682	1.5%	29,391	0.0%	597	0.2%	13,660	0.5%	134,330
HDPE Plastic Containers	0.5%	76,674	1.0%	19,276	0.0%	78	0.0%	1,764	0.4%	97,792
Miscellaneous Plastic Containers	0.3%	49,683	1.4%	27,073	0.0%	298	0.1%	3,871	0.3%	80,925
Plastic Trash Bags	2.4%	389,709	0.3%	5,514	0.0%	188	0.0%	935	1.5%	396,345
Plastic Grocery and Other Merchandise Bags	0.2%	32,264	0.4%	7,256	0.0%	42	0.0%	8	0.2%	39,570
Non-Bag Commercial and Industrial Packaging Film	0.6%	107,244	0.9%	18,306	0.0%	138	0.1%	7,512	0.5%	133,200
Film Products	0.0%	2,545	0.1%	1,927	0.0%	25	0.1%	4,303	0.0%	8,800
Other Film - Other	2.5%	407,559	0.8%	15,406	0.1%	1,983	0.0%	1,741	1.6%	426,689
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	34,842	0.8%	16,595	0.0%	0	0.0%	2,179	0.2%	53,617
Durable Plastic Items - Other	1.1%	175,506	0.4%	8,823	0.0%	57	0.1%	3,332	0.7%	187,719
Remainder/Composite Plastic	4.6%	764,779	1.2%	24,419	0.0%	388	0.1%	6,279	3.1%	795,865
Other Organic	**38.8%**	**6,420,296**	**3.7%**	**73,494**	**97.8%**	**1,666,288**	**25.6%**	**1,459,333**	**37.1%**	**9,619,411**
Food	24.4%	4,035,748	1.7%	34,272	15.6%	265,021	16.3%	928,965	20.3%	5,264,007
Leaves and Grass	3.2%	524,559	0.0%	416	80.6%	1,372,233	2.6%	146,752	7.9%	2,043,959
Prunings and Trimmings	1.7%	274,586	0.3%	6,269	1.7%	28,412	6.3%	356,802	2.6%	666,069
Branches and Stumps	0.4%	64,366	0.9%	17,723	0.0%	0	0.3%	19,260	0.4%	101,349
Manures	0.1%	14,884	0.0%	0	0.0%	0	0.0%	0	0.1%	14,884
Textiles	2.3%	374,010	0.2%	3,990	0.0%	622	0.1%	7,536	1.5%	386,157
Carpet	0.8%	134,528	0.3%	6,989	0.0%	0	0.0%	17	0.5%	141,534
Remainder/Composite Organic	6.0%	997,614	0.2%	3,835	0.0%	0	0.0%	2	3.9%	1,001,452
Inerts and Other	**13.3%**	**2,198,596**	**1.7%**	**34,948**	**0.0%**	**310**	**5.1%**	**291,642**	**9.7%**	**2,525,497**
Concrete	0.7%	122,482	0.0%	0	0.0%	0	0.0%	718	0.5%	123,200
Asphalt Paving	0.3%	48,429	0.0%	0	0.0%	0	0.0%	0	0.2%	48,429
Asphalt Roofing	0.4%	61,718	0.0%	50	0.0%	0	0.0%	0	0.2%	61,768
Clean Dimensional Lumber	0.7%	113,949	0.5%	10,668	0.0%	0	0.0%	2,830	0.5%	127,447
Clean Engineered Wood	0.6%	107,458	0.0%	0	0.0%	0	0.0%	0	0.4%	107,458
Clean Pallets & Crates	4.4%	735,005	0.9%	18,139	0.0%	0	4.4%	249,857	3.9%	1,003,001
Other Wood Waste	2.3%	387,705	0.0%	176	0.0%	0	0.0%	434	1.5%	388,315
Gypsum Board	0.6%	99,223	0.0%	537	0.0%	0	0.0%	642	0.4%	100,403
Rock, Soil and Fines	1.0%	170,747	0.0%	0	0.0%	310	0.6%	32,886	0.8%	203,943
Remainder/Composite Inerts and Other	2.1%	351,881	0.3%	5,378	0.0%	0	0.1%	4,275	1.4%	361,534
Household Hazardous Waste	**0.2%**	**34,884**	**0.0%**	**734**	**0.0%**	**14**	**0.0%**	**2,564**	**0.1%**	**38,196**
Paint	0.1%	9,094	0.0%	0	0.0%	0	0.0%	0	0.0%	9,094
Vehicle and Equipment Fluids	0.0%	6,707	0.0%	0	0.0%	0	0.0%	0	0.0%	6,707
Used Oil	0.0%	343	0.0%	404	0.0%	0	0.0%	0	0.0%	747
Batteries	0.0%	2,268	0.0%	266	0.0%	14	0.0%	2,530	0.0%	5,077
Remainder/Composite Household Hazardous	0.1%	16,473	0.0%	64	0.0%	0	0.0%	35	0.1%	16,571
Special Waste	**1.3%**	**207,163**	**0.1%**	**1,799**	**0.0%**	**0**	**0.1%**	**4,665**	**0.8%**	**213,628**
Ash	0.2%	30,397	0.0%	0	0.0%	0	0.0%	0	0.1%	30,397
Treated Medical Waste	0.0%	5,849	0.0%	347	0.0%	0	0.0%	0	0.0%	6,195
Bulky Items	0.9%	153,016	0.0%	715	0.0%	0	0.1%	4,665	0.6%	158,396
Tires	0.0%	3,884	0.0%	40	0.0%	0	0.0%	0	0.0%	3,924
Remainder/Composite Special Waste	0.1%	14,017	0.0%	698	0.0%	0	0.0%	0	0.1%	14,715
Mixed Residue	**0.4%**	**66,303**	**0.2%**	**3,481**	**0.0%**	**0**	**0.0%**	**60**	**0.3%**	**69,843**
Totals	**100.0%**	**16,536,664**	**100.0%**	**2,001,671**	**100.0%**	**1,703,492**	**100.0%**	**5,690,924**	**100.0%**	**25,932,751**
Streams Sampled	840		338		41		720		**1,939**	
TPEPY	1.13		0.14		0.12		0.39		**1.77**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Arts, Entertainment, & Recreation

Table 33 presents key findings for the Arts, Entertainment, & Recreation industry group (Group 1). Statewide, Group 1 disposed of nearly 830,000 tons and diverted more than 168,000 tons. Total generation was approximately 3.08 TPEPY. Group 1 had the second-highest generation rate and the highest Disposed stream TPEPY among all industry groups. The high Disposed TPEPY in Group 1 can be partly attributed to the fact that it was not just employees generating material at these businesses—large numbers of visitors and guests were also generating material at these sites. Group 1 included live performance venues, parks, fairgrounds, bowling alleys, movie theaters, and stadiums. *Food* was the most prevalent divertible material type in the Group 1 Disposed stream, accounting for 34 percent of disposal. Group 1 had the second densest Disposed stream of any industry group, 153 pounds per cubic yard (slightly higher than for restaurants). This likely reflects the high proportion of food in the Group 1 Disposed stream.

Table 33. Key Findings and Metrics: Arts, Entertainment, & Recreation

Arts, Entertainment, & Recreation				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
2.56	0.52	829,661	168,036	17%
Top Three Diversion Opportunities in Disposed Stream				
• Food (34%, 278,639 tons) • Remainder/Composite Paper - Compostable (9%, 78,350 tons) • Leaves and Grass (6%, 48,015 tons)				

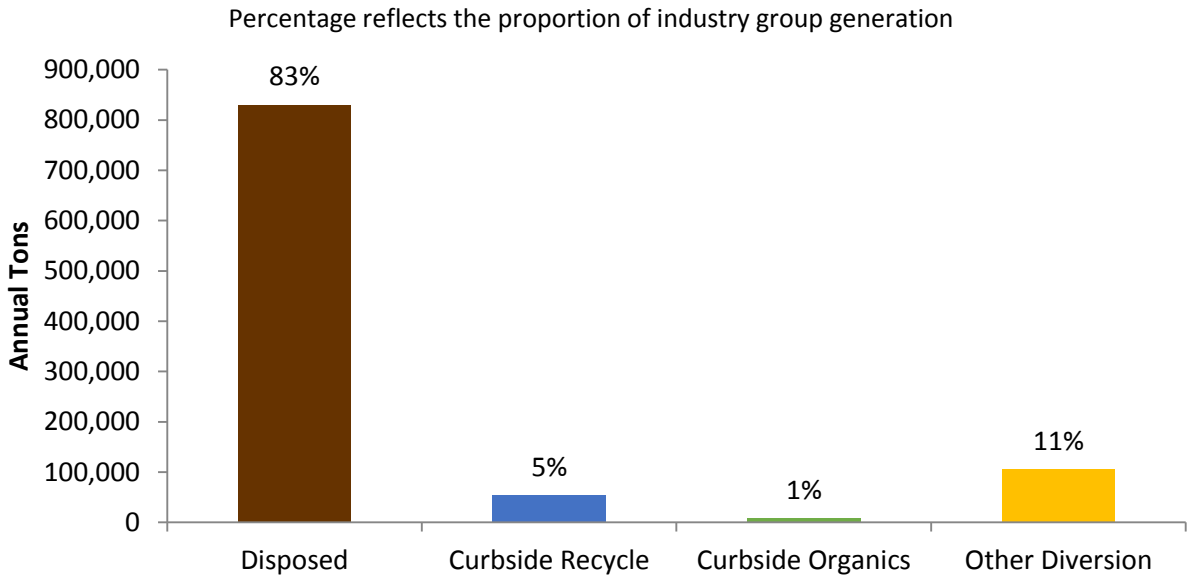
In addition to normalizing generation on a per employee basis (TPEPY), for this group the project team normalized generation by the number of annual visitors at each generator site. As shown in Table 34, Group 1 businesses generated an estimated 0.53 tons per thousand visitors per year. The number of sites used in this calculation is noted in Table 98 in Appendix C: Description of Calculations.

Table 34. Generation Rate Summary by Weight: Arts, Entertainment, & Recreation (tons per 1,000 visitors per year)

Tons per 1,000 Visitors per Year	**Disposed**	**Curbside Recycle**	**Curbside Organics**	**Other Diversion**	**Generation**
Arts, Entertainment, & Recreation	0.43	0.03	0.01	0.06	**0.53**

Figure 11 presents the annual tons for each stream in Group 1. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately 83 percent of generation at Group 1 businesses went to the Disposed stream.

Figure 11. Annual Tons by Waste Stream: Arts, Entertainment, & Recreation



Each stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 12 breaks down the potential recoverability (by recoverability group) for each stream in Group 1. As shown, more than three-quarters of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 1 Curbside Recycle contamination rate was 11 percent. No contamination was observed in the Curbside Organics stream.

Figure 12. Recoverability by Stream: Arts, Entertainment, & Recreation

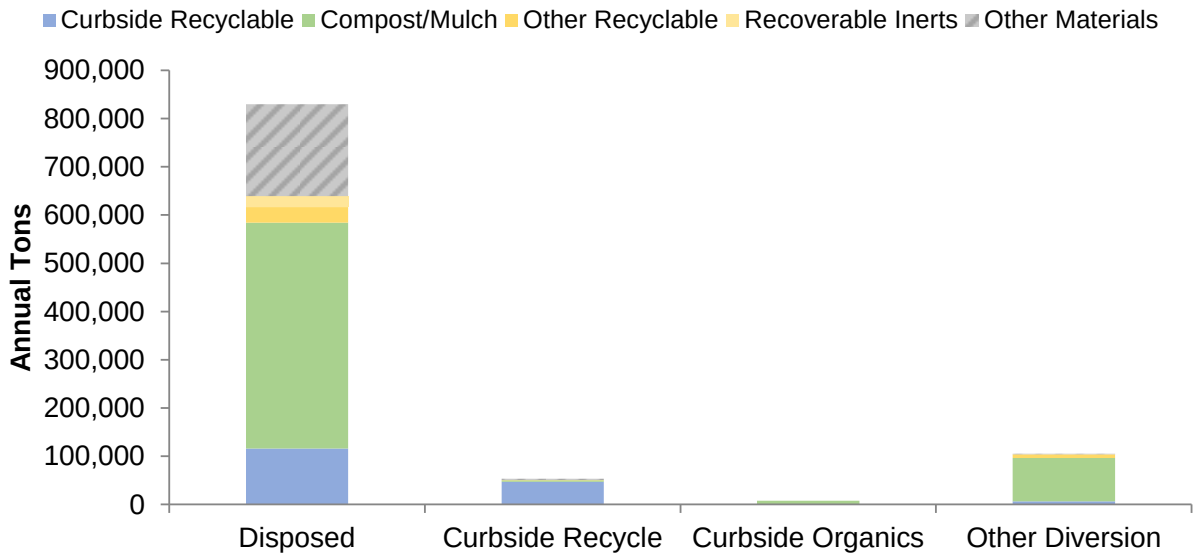


Figure 13 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 13 illustrates, approximately 57 percent of total generation in Group 1 was material in the **Compost/Mulch** recoverability group. **Other Materials** and **Curbside Recyclable** accounted for 19 percent and 17 percent of total generation, respectively. When combined, divertible materials accounted for roughly 81 percent of the Group 1 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 13. Recoverability of Materials Generated in the Arts, Entertainment, & Recreation Sector

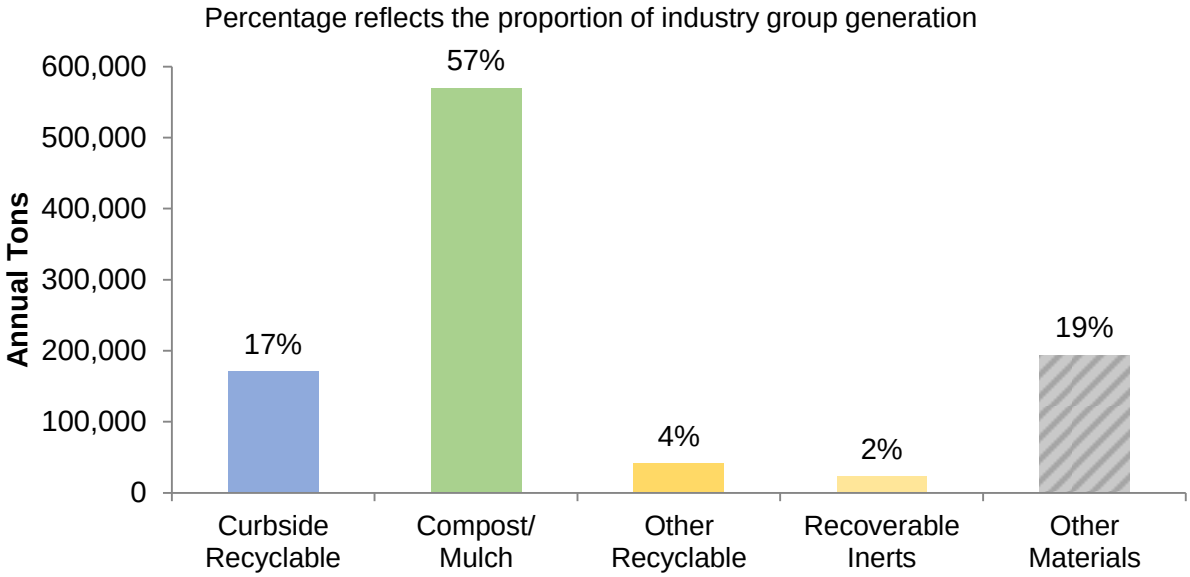


Table 35 presents detailed composition results for each stream in Group 1, as well as for the total group generation.

Table 35. Composition Summary: Arts, Entertainment, & Recreation

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**20.9%**	**173,415**	**67.1%**	**36,146**	**0.0%**	**0**	**1.2%**	**1,286**	**21.1%**	**210,847**
Uncoated Corrugated Cardboard	2.0%	16,236	52.4%	28,249	0.0%	0	0.4%	449	4.5%	44,934
Paper Bags	0.3%	2,725	0.2%	105	0.0%	0	0.0%	0	0.3%	2,830
Newspaper	1.6%	13,325	0.7%	351	0.0%	0	0.0%	0	1.4%	13,676
White Ledger Paper	0.6%	5,186	2.1%	1,120	0.0%	0	0.0%	0	0.6%	6,306
Other Office Paper	0.8%	6,872	2.6%	1,403	0.0%	0	0.0%	0	0.8%	8,275
Magazines and Catalogs	0.5%	4,205	2.1%	1,147	0.0%	0	0.0%	0	0.5%	5,352
Phone Books and Directories	0.0%	129	0.0%	0	0.0%	0	0.0%	0	0.0%	129
Other Miscellaneous Paper - Compostable	0.4%	3,346	1.0%	514	0.0%	0	0.7%	750	0.5%	4,610
Other Miscellaneous Paper - Other	2.8%	23,273	2.6%	1,410	0.0%	0	0.0%	0	2.5%	24,682
Remainder/Composite Paper - Compostable	9.4%	78,350	3.1%	1,680	0.0%	0	0.0%	0	8.0%	80,030
Remainder/Composite Paper - Other	2.4%	19,766	0.3%	168	0.0%	0	0.1%	87	2.0%	20,021
Glass	**3.1%**	**26,100**	**19.2%**	**10,334**	**0.0%**	**0**	**5.0%**	**5,262**	**4.2%**	**41,696**
Clear Glass Bottles and Containers	1.2%	10,094	5.4%	2,920	0.0%	0	0.2%	264	1.3%	13,278
Green Glass Bottles and Containers	1.0%	7,982	10.0%	5,392	0.0%	0	0.0%	34	1.3%	13,407
Brown Glass Bottles and Containers	0.9%	7,257	3.8%	2,022	0.0%	0	4.7%	4,965	1.4%	14,244
Other Glass Colored Bottles and Containers	0.0%	63	0.0%	0	0.0%	0	0.0%	0	0.0%	63
Flat Glass	0.0%	24	0.0%	0	0.0%	0	0.0%	0	0.0%	24
Remainder/Composite Glass	0.1%	681	0.0%	0	0.0%	0	0.0%	0	0.1%	681
Metal	**1.8%**	**15,055**	**2.5%**	**1,366**	**0.0%**	**0**	**5.9%**	**6,211**	**2.3%**	**22,632**
Tin/Steel Cans	0.7%	5,424	1.8%	993	0.0%	0	0.2%	243	0.7%	6,660
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Ferrous	0.2%	1,937	0.0%	0	0.0%	0	5.2%	5,538	0.7%	7,475
Aluminum Cans	0.3%	2,405	0.6%	348	0.0%	0	0.2%	171	0.3%	2,924
Other Non-Ferrous	0.2%	1,634	0.0%	26	0.0%	0	0.2%	258	0.2%	1,918
Remainder/Composite Metal	0.4%	3,655	0.0%	0	0.0%	0	0.0%	0	0.4%	3,655
Electronics	**0.0%**	**202**	**0.0%**	**0**	**0.0%**	**0**	**1.6%**	**1,660**	**0.2%**	**1,862**
Brown Goods	0.0%	171	0.0%	0	0.0%	0	0.0%	0	0.0%	171
Computer-related Electronics	0.0%	31	0.0%	0	0.0%	0	1.4%	1,514	0.2%	1,545
Other Small Consumer Electronics	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	0.1%	146	0.0%	146
Plastic	**13.8%**	**114,388**	**6.7%**	**3,621**	**0.0%**	**0**	**1.6%**	**1,740**	**12.0%**	**119,748**
PETE Plastic Containers	0.8%	6,361	2.4%	1,313	0.0%	0	0.5%	492	0.8%	8,167
HDPE Plastic Containers	0.3%	2,280	1.1%	592	0.0%	0	0.0%	40	0.3%	2,913
Miscellaneous Plastic Containers	0.3%	2,582	0.7%	351	0.0%	0	0.2%	201	0.3%	3,133
Plastic Trash Bags	2.5%	21,065	0.9%	465	0.0%	0	0.0%	0	2.2%	21,531
Plastic Grocery and Other Merchandise Bags	0.2%	1,419	0.2%	109	0.0%	0	0.0%	0	0.2%	1,529
Non-Bag Commercial and Industrial Packaging Film	0.4%	3,466	0.0%	26	0.0%	0	0.0%	0	0.4%	3,492
Film Products	0.0%	125	0.2%	99	0.0%	0	0.0%	13	0.0%	237
Other Film - Other	2.1%	17,789	0.9%	484	0.0%	0	0.9%	927	1.9%	19,200
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	1,796	0.1%	35	0.0%	0	0.0%	0	0.2%	1,831
Durable Plastic Items - Other	1.0%	8,023	0.0%	6	0.0%	0	0.0%	0	0.8%	8,030
Remainder/Composite Plastic	6.0%	49,479	0.3%	140	0.0%	0	0.1%	67	5.0%	49,686
Other Organic	**52.9%**	**439,228**	**2.8%**	**1,508**	**100.0%**	**8,439**	**84.2%**	**89,053**	**53.9%**	**538,227**
Food	33.6%	278,639	1.8%	951	0.0%	0	23.6%	24,962	30.5%	304,552
Leaves and Grass	5.8%	48,015	0.0%	0	0.0%	0	22.6%	23,930	7.2%	71,945
Prunings and Trimmings	2.6%	21,669	0.1%	40	100.0%	8,439	19.9%	21,061	5.1%	51,209
Branches and Stumps	3.3%	27,490	0.0%	0	0.0%	0	18.1%	19,100	4.7%	46,590
Manures	0.1%	526	0.0%	0	0.0%	0	0.0%	0	0.1%	526
Textiles	1.6%	13,096	0.5%	289	0.0%	0	0.0%	0	1.3%	13,385
Carpet	1.0%	8,546	0.0%	0	0.0%	0	0.0%	0	0.9%	8,546
Remainder/Composite Organic	5.0%	41,247	0.4%	228	0.0%	0	0.0%	0	4.2%	41,474
Inerts and Other	**5.6%**	**46,731**	**0.3%**	**176**	**0.0%**	**0**	**0.0%**	**0**	**4.7%**	**46,907**
Concrete	1.7%	14,400	0.0%	0	0.0%	0	0.0%	0	1.4%	14,400
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	218	0.0%	0	0.0%	0	0.0%	0	0.0%	218
Clean Dimensional Lumber	0.6%	5,150	0.0%	0	0.0%	0	0.0%	0	0.5%	5,150
Clean Engineered Wood	0.3%	2,457	0.0%	0	0.0%	0	0.0%	0	0.2%	2,457
Clean Pallets & Crates	0.3%	2,161	0.0%	0	0.0%	0	0.0%	0	0.2%	2,161
Other Wood Waste	0.5%	3,886	0.3%	176	0.0%	0	0.0%	0	0.4%	4,062
Gypsum Board	0.0%	141	0.0%	0	0.0%	0	0.0%	0	0.0%	141
Rock, Soil and Fines	0.9%	7,844	0.0%	0	0.0%	0	0.0%	0	0.8%	7,844
Remainder/Composite Inerts and Other	1.3%	10,476	0.0%	0	0.0%	0	0.0%	0	1.0%	10,476
Household Hazardous Waste	**0.1%**	**682**	**0.0%**	**0**	**0.0%**	**0**	**0.5%**	**520**	**0.1%**	**1,201**
Paint	0.0%	158	0.0%	0	0.0%	0	0.0%	0	0.0%	158
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.0%	57	0.0%	0	0.0%	0	0.0%	0	0.0%	57
Batteries	0.0%	379	0.0%	0	0.0%	0	0.5%	520	0.1%	899
Remainder/Composite Household Hazardous	0.0%	88	0.0%	0	0.0%	0	0.0%	0	0.0%	88
Special Waste	**1.4%**	**12,017**	**1.3%**	**715**	**0.0%**	**0**	**0.0%**	**0**	**1.3%**	**12,732**
Ash	0.8%	6,928	0.0%	0	0.0%	0	0.0%	0	0.7%	6,928
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	0.6%	5,034	1.3%	715	0.0%	0	0.0%	0	0.6%	5,749
Tires	0.0%	55	0.0%	0	0.0%	0	0.0%	0	0.0%	55
Remainder/Composite Special Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Mixed Residue	**0.2%**	**1,844**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.2%**	**1,844**
Totals	**100.0%**	**829,661**	**100.0%**	**53,865**	**100.0%**	**8,439**	**100.0%**	**105,732**	**100.0%**	**997,697**
Streams Sampled	54		17		1		31		**103**	
TPEPY	2.56		0.17		0.03		0.33		**3.08**	

Percentages for material types may not total 100% due to rounding.

Findings for Durable Wholesale & Trucking

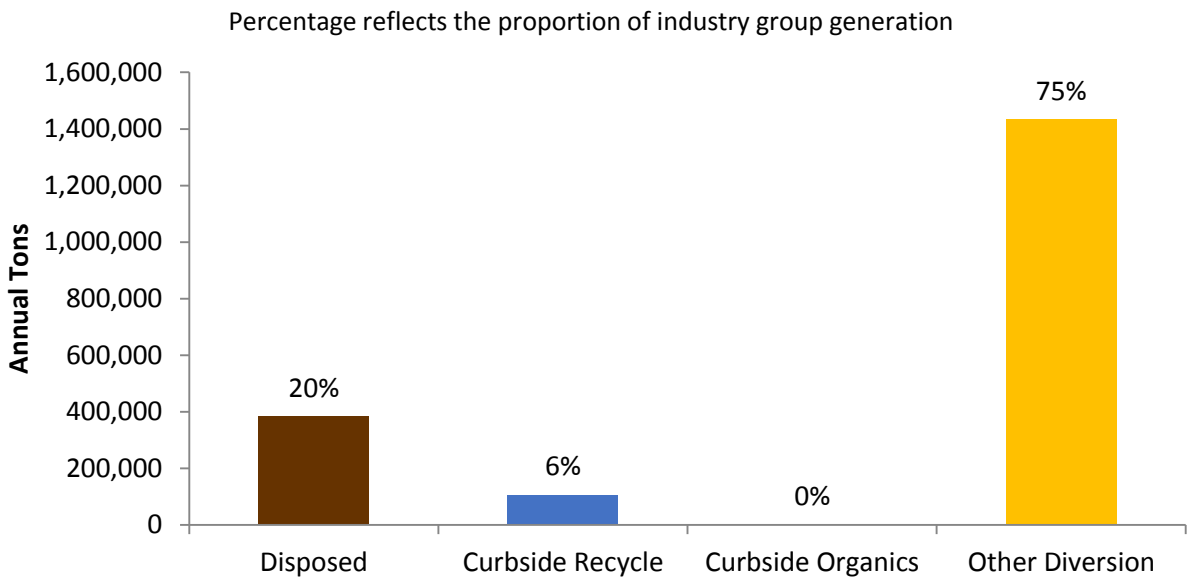
Table 36 presents key findings for the Durable Wholesale & Trucking industry group (Group 2). Group 2 was mostly composed of businesses warehousing and shipping durable consumer goods (items generally with a normal life expectancy of three years or more) such as motor vehicles, furniture, construction materials, machinery and equipment (including household-type appliances), sporting goods, toys, and hobby goods. Statewide, Group 2 diverted more than 1.5 million tons and had one of the highest diversion rates: 80 percent. The Group 2 generation rate was approximately 2.99 TPEPY, third-highest among all industry groups. The high generation rate and diversion rate for Group 2 were largely due to high Other Diversion rates for sites in this group. Group 2 businesses diverted large quantities of *uncoated corrugated cardboard* and scrap metal. *Clean pallets and crates* was the most prevalent divertible material type in the Group 2 Disposed stream, accounting for 13 percent of disposal.

Table 36. Key Findings and Metrics: Durable Wholesale & Trucking

Durable Wholesale & Trucking				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.60	2.40	381,767	1,538,803	80%
Top Three Diversion Opportunities in Disposed Stream				
• Clean Pallets & Crates (13%, 50,937 tons) • Food (10%, 38,192 tons) • Remainder/Composite Paper - Compostable (6%, 24,689 tons)				

Figure 14 presents the annual tons for each stream in Group 2. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means, such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately three-quarters of total generation at Group 2 businesses went to the Other Diversion stream, and most of the remaining generation was in the Disposed stream. Group 2 reuses large quantities of *uncoated corrugated cardboard* boxes and sells large quantities of *uncoated corrugated cardboard* and *other ferrous metal*.

Figure 14. Annual Tons by Waste Stream: Durable Wholesale & Trucking



Each stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 15 breaks down the potential recoverability (by recoverability group) for each stream in Group 2. As shown, approximately two-thirds of the Disposed stream was divertible, mostly **Compost/Mulch** materials. The Other Diversion stream was primarily **Other Recyclable** materials, including scrap metals not usually recycled through curbside programs.

The Group 2 Curbside Recycle contamination rate was 13 percent. The study did not include any sites from this group with Curbside Organics.

Figure 15. Recoverability by Stream: Durable Wholesale & Trucking

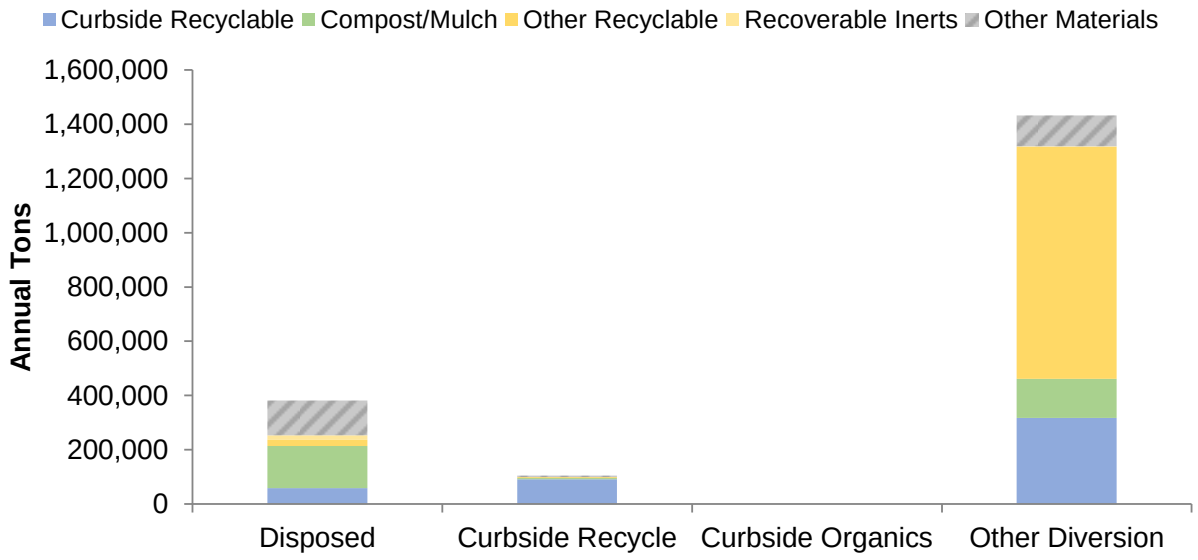


Figure 16 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 16 illustrates, approximately 46 percent of total generation in Group 2 was material in the **Other Recyclable** recoverability group, and approximately 24 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 87 percent of the Group 2 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 16. Recoverability of Materials Generated in the Durable Wholesale & Trucking Sector

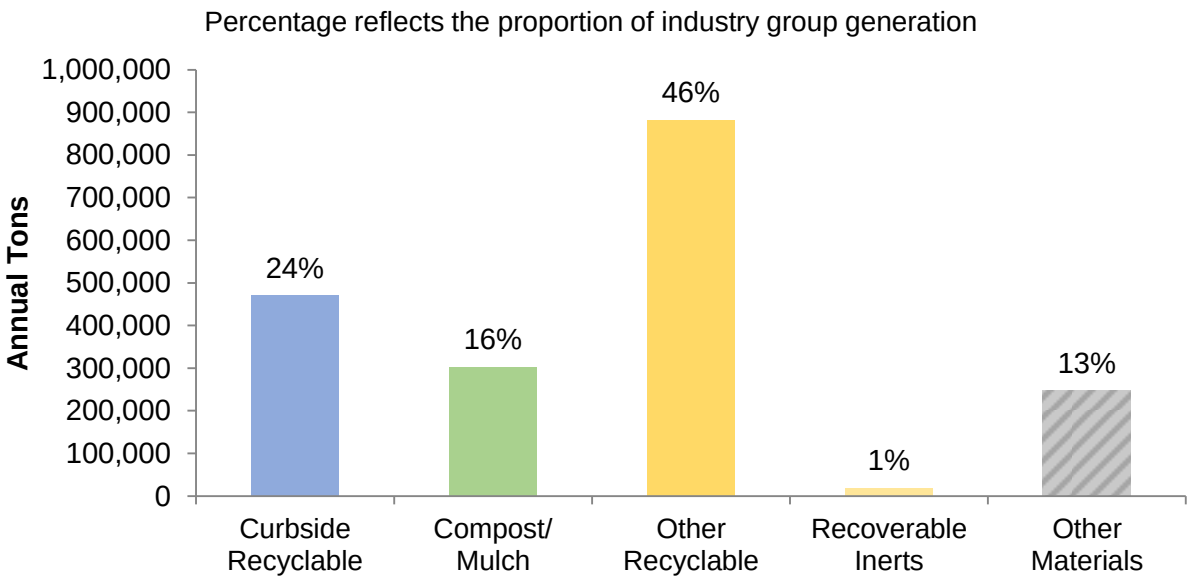


Table 37 presents detailed composition results for each stream in Group 2, as well as for the total group generation.

Table 37. Composition Summary: Durable Wholesale & Trucking

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**25.8%**	**98,563**	**91.3%**	**97,030**	**-**	**-**	**22.1%**	**316,261**	**26.7%**	**511,854**
Uncoated Corrugated Cardboard	4.8%	18,334	67.5%	71,750	-	-	21.6%	309,537	20.8%	399,621
Paper Bags	0.4%	1,582	1.1%	1,161	-	-	0.0%	88	0.1%	2,831
Newspaper	1.0%	3,944	0.2%	225	-	-	0.0%	715	0.3%	4,884
White Ledger Paper	1.9%	7,253	7.5%	8,004	-	-	0.0%	416	0.8%	15,673
Other Office Paper	1.7%	6,424	6.4%	6,790	-	-	0.2%	2,925	0.8%	16,140
Magazines and Catalogs	0.5%	2,066	1.8%	1,926	-	-	0.0%	463	0.2%	4,455
Phone Books and Directories	0.1%	271	0.2%	188	-	-	0.0%	140	0.0%	599
Other Miscellaneous Paper - Compostable	0.5%	1,968	0.7%	760	-	-	0.0%	162	0.2%	2,891
Other Miscellaneous Paper - Other	3.9%	15,057	0.6%	649	-	-	0.1%	1,535	0.9%	17,241
Remainder/Composite Paper - Compostable	6.5%	24,689	3.1%	3,267	-	-	0.0%	232	1.5%	28,188
Remainder/Composite Paper - Other	4.4%	16,972	2.2%	2,310	-	-	0.0%	49	1.0%	19,331
Glass	**1.6%**	**6,065**	**0.5%**	**500**	**-**	**-**	**0.0%**	**143**	**0.3%**	**6,709**
Clear Glass Bottles and Containers	0.2%	838	0.4%	384	-	-	0.0%	6	0.1%	1,228
Green Glass Bottles and Containers	0.0%	100	0.1%	64	-	-	0.0%	134	0.0%	298
Brown Glass Bottles and Containers	0.2%	638	0.0%	52	-	-	0.0%	3	0.0%	692
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Flat Glass	1.1%	4,343	0.0%	0	-	-	0.0%	0	0.2%	4,343
Remainder/Composite Glass	0.0%	146	0.0%	0	-	-	0.0%	0	0.0%	146
Metal	**4.5%**	**17,117**	**1.0%**	**1,029**	**-**	**-**	**64.1%**	**918,341**	**48.8%**	**936,487**
Tin/Steel Cans	0.1%	425	0.2%	203	-	-	0.0%	557	0.1%	1,185
Major Appliances	0.3%	1,145	0.0%	0	-	-	0.0%	0	0.1%	1,145
Used Oil Filters	0.1%	208	0.0%	0	-	-	0.0%	0	0.0%	208
Other Ferrous	1.0%	3,729	0.3%	344	-	-	55.5%	795,354	41.6%	799,427
Aluminum Cans	0.1%	351	0.1%	126	-	-	0.0%	102	0.0%	580
Other Non-Ferrous	0.9%	3,560	0.1%	156	-	-	0.6%	8,568	0.6%	12,284
Remainder/Composite Metal	2.0%	7,699	0.2%	200	-	-	7.9%	113,760	6.3%	121,659
Electronics	**0.7%**	**2,617**	**0.0%**	**0**	**-**	**-**	**3.6%**	**51,021**	**2.8%**	**53,638**
Brown Goods	0.5%	1,840	0.0%	0	-	-	0.0%	3	0.1%	1,843
Computer-related Electronics	0.0%	72	0.0%	0	-	-	3.5%	50,785	2.6%	50,857
Other Small Consumer Electronics	0.2%	705	0.0%	0	-	-	0.0%	0	0.0%	705
Video Display Devices	0.0%	0	0.0%	0	-	-	0.0%	233	0.0%	233
Plastic	**13.7%**	**52,355**	**4.9%**	**5,200**	**-**	**-**	**0.1%**	**1,291**	**3.1%**	**58,845**
PETE Plastic Containers	0.2%	837	0.6%	641	-	-	0.1%	722	0.1%	2,200
HDPE Plastic Containers	0.2%	612	0.2%	240	-	-	0.0%	382	0.1%	1,235
Miscellaneous Plastic Containers	0.3%	1,102	0.2%	190	-	-	0.0%	45	0.1%	1,337
Plastic Trash Bags	2.5%	9,624	0.2%	211	-	-	0.0%	0	0.5%	9,835
Plastic Grocery and Other Merchandise Bags	0.2%	617	0.0%	19	-	-	0.0%	5	0.0%	641
Non-Bag Commercial and Industrial Packaging Film	1.4%	5,307	2.8%	2,952	-	-	0.0%	0	0.4%	8,259
Film Products	0.0%	27	0.0%	8	-	-	0.0%	0	0.0%	35
Other Film - Other	1.8%	6,900	0.4%	412	-	-	0.0%	63	0.4%	7,375
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	505	0.0%	0	-	-	0.0%	0	0.0%	505
Durable Plastic Items - Other	1.6%	6,263	0.4%	422	-	-	0.0%	0	0.3%	6,685
Remainder/Composite Plastic	5.4%	20,562	0.1%	105	-	-	0.0%	73	1.1%	20,740
Other Organic	**18.3%**	**69,760**	**0.2%**	**256**	**-**	**-**	**9.3%**	**132,560**	**10.5%**	**202,576**
Food	10.0%	38,192	0.2%	217	-	-	0.0%	355	2.0%	38,765
Leaves and Grass	1.9%	7,138	0.0%	0	-	-	0.0%	0	0.4%	7,138
Prunings and Trimmings	0.7%	2,771	0.0%	0	-	-	9.2%	132,188	7.0%	134,959
Branches and Stumps	0.7%	2,599	0.0%	0	-	-	0.0%	0	0.1%	2,599
Manures	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Textiles	1.4%	5,356	0.0%	39	-	-	0.0%	0	0.3%	5,395
Carpet	0.3%	1,320	0.0%	0	-	-	0.0%	17	0.1%	1,337
Remainder/Composite Organic	3.2%	12,384	0.0%	0	-	-	0.0%	0	0.6%	12,384
Inerts and Other	**32.7%**	**124,766**	**0.0%**	**0**	**-**	**-**	**0.9%**	**12,894**	**7.2%**	**137,660**
Concrete	1.7%	6,515	0.0%	0	-	-	0.0%	0	0.3%	6,515
Asphalt Paving	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Asphalt Roofing	1.6%	6,171	0.0%	0	-	-	0.0%	0	0.3%	6,171
Clean Dimensional Lumber	4.6%	17,547	0.0%	0	-	-	0.0%	0	0.9%	17,547
Clean Engineered Wood	2.3%	8,688	0.0%	0	-	-	0.0%	0	0.5%	8,688
Clean Pallets & Crates	13.3%	50,937	0.0%	0	-	-	0.8%	11,211	3.2%	62,148
Other Wood Waste	3.0%	11,496	0.0%	0	-	-	0.0%	0	0.6%	11,496
Gypsum Board	0.6%	2,418	0.0%	0	-	-	0.0%	0	0.1%	2,418
Rock, Soil and Fines	0.6%	2,108	0.0%	0	-	-	0.1%	1,683	0.2%	3,791
Remainder/Composite Inerts and Other	4.9%	18,887	0.0%	0	-	-	0.0%	0	1.0%	18,887
Household Hazardous Waste	**0.0%**	**146**	**0.0%**	**0**	**-**	**-**	**0.0%**	**40**	**0.0%**	**186**
Paint	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Used Oil	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Batteries	0.0%	72	0.0%	0	-	-	0.0%	40	0.0%	112
Remainder/Composite Household Hazardous	0.0%	74	0.0%	0	-	-	0.0%	0	0.0%	74
Special Waste	**2.5%**	**9,622**	**0.0%**	**0**	**-**	**-**	**0.0%**	**0**	**0.5%**	**9,622**
Ash	0.2%	582	0.0%	0	-	-	0.0%	0	0.0%	582
Treated Medical Waste	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Bulky Items	2.4%	9,040	0.0%	0	-	-	0.0%	0	0.5%	9,040
Tires	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Mixed Residue	**0.2%**	**754**	**2.1%**	**2,238**	**-**	**-**	**0.0%**	**0**	**0.2%**	**2,992**
Totals	**100.0%**	**381,767**	**100.0%**	**106,253**	**-**	**-**	**100.0%**	**1,432,550**	**100.0%**	**1,920,570**
Streams Sampled	52		14		0		64		**130**	
TPEPY	0.60		0.17		0.00		2.23		**2.99**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Education

Table 38 presents key findings for the Education industry group (Group 3). Group 3 had one of the lowest generation rates, 0.50 TPEPY, and one of the lowest diversion rates, 15 percent, in the study. *Food* was the most prevalent divertible material type in the Group 3 Disposed stream, accounting for 34 percent of disposal.

Table 38. Key Findings and Metrics: Education

Education				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.43	0.07	562,442	97,926	15%
Top Three Diversion Opportunities in Disposed Stream				
• Food (34%, 189,957 tons) • Remainder/Composite Paper - Compostable (13%, 71,730 tons) • Other Miscellaneous Paper - Other (4%, 22,709 tons)				

In addition to normalizing generation on a per employee basis (TPEPY), for this group the project team normalized generation by the number of students at each generator site. As shown in Table 39, Group 3 sites generated an estimated 3.67 tons per hundred students per year. The number of sites used in this calculation is noted in Table 98 in Appendix C: Description of Calculations.

Table 39. Generation Rate Summary by Weight: Education (tons per 100 students per year)

Tons per 100 Students per Year	**Disposed**	**Curbside Recycle**	**Curbside Organics**	**Other Diversion**	**Generation**
Education	3.23	0.26	0.06	0.12	**3.67**

Figure 17 presents the annual tons for each stream in Group 3. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately 85 percent of total generation at Group 3 businesses went to the Disposed stream.

Figure 17. Annual Tons by Waste Stream: Education

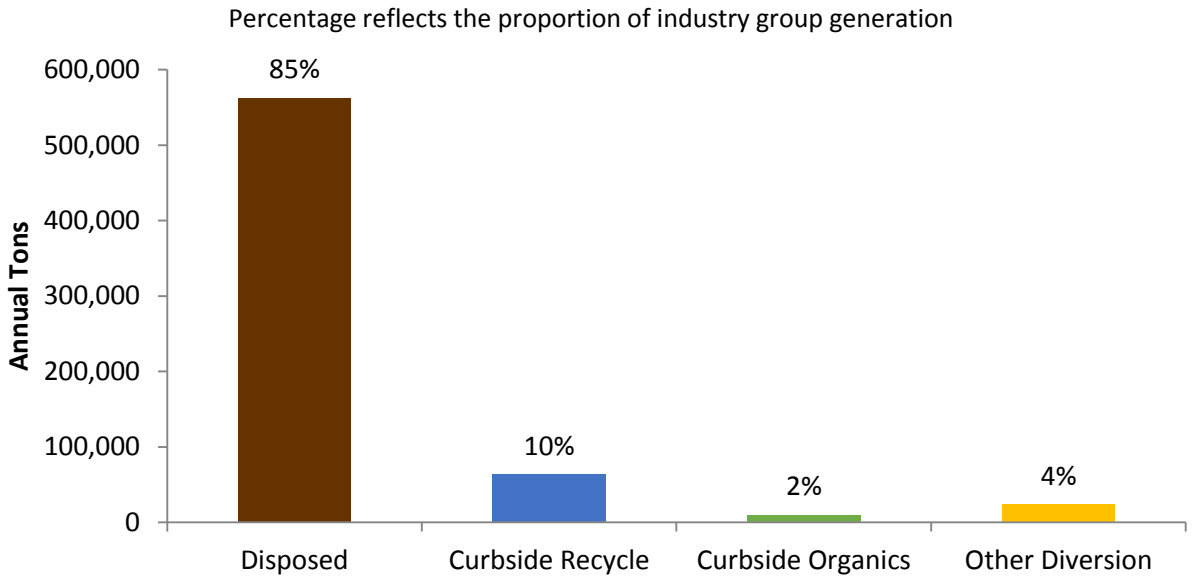


Figure 18 breaks down the potential recoverability (by recoverability group) for each stream in Group 3. As shown, more than three-quarters of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 3 Curbside Recycle contamination rate was 19 percent, and the Curbside Organics contamination rate was 4 percent.

Figure 18. Recoverability by Stream: Education

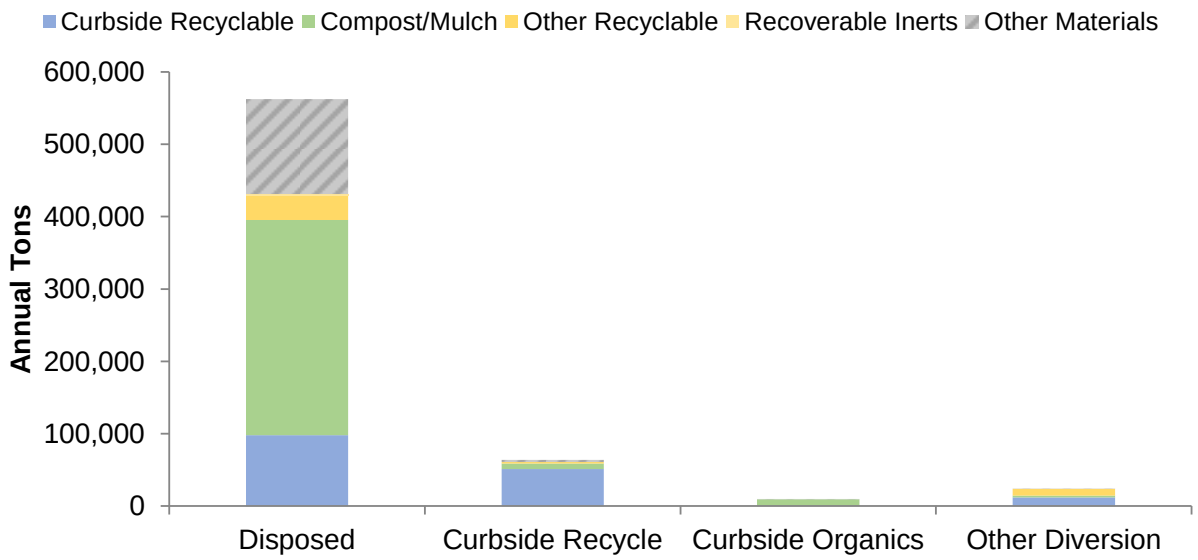


Figure 19 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 19 illustrates, approximately 48 percent of total generation in Group 3 was material in the **Compost/Mulch** recoverability group, and approximately 25 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 80 percent of the Group 3 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 19. Recoverability of Materials Generated in the Education Sector

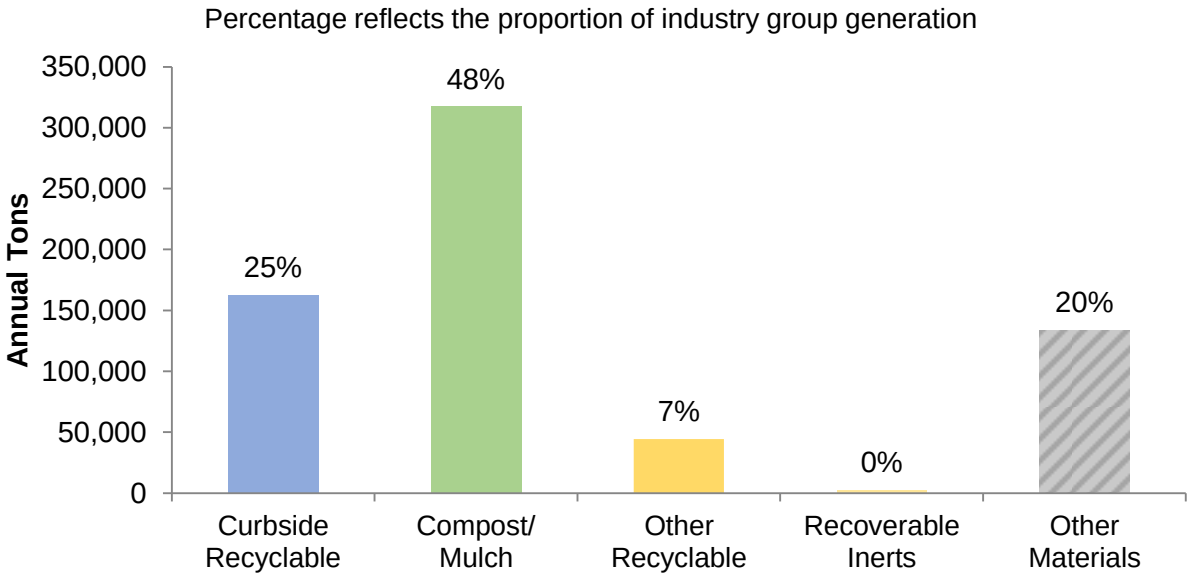


Table 40 presents detailed composition results for each stream in Group 3, as well as for the total group generation.

Table 40. Composition Summary: Education

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**33.3%**	**187,070**	**85.4%**	**54,586**	**5.9%**	**584**	**30.1%**	**7,262**	**37.8%**	**249,502**
Uncoated Corrugated Cardboard	1.2%	6,936	27.6%	17,663	0.0%	0	11.4%	2,757	4.1%	27,356
Paper Bags	0.3%	1,797	0.5%	294	0.0%	0	0.2%	52	0.3%	2,144
Newspaper	1.2%	6,930	2.1%	1,366	0.0%	0	0.5%	131	1.3%	8,427
White Ledger Paper	3.5%	19,892	22.4%	14,336	0.0%	0	8.5%	2,040	5.5%	36,268
Other Office Paper	3.7%	20,791	10.3%	6,566	0.0%	0	1.9%	449	4.2%	27,806
Magazines and Catalogs	1.1%	5,974	6.2%	3,952	0.0%	0	2.6%	624	1.6%	10,551
Phone Books and Directories	0.0%	0	0.5%	317	0.0%	0	0.0%	0	0.0%	317
Other Miscellaneous Paper - Compostable	0.4%	2,036	6.5%	4,146	2.1%	205	4.6%	1,105	1.1%	7,492
Other Miscellaneous Paper - Other	4.0%	22,709	7.0%	4,454	3.8%	375	0.4%	93	4.2%	27,631
Remainder/Composite Paper - Compostable	12.8%	71,730	0.7%	471	0.0%	0	0.0%	0	10.9%	72,201
Remainder/Composite Paper - Other	5.0%	28,275	1.6%	1,021	0.0%	4	0.0%	10	4.4%	29,309
Glass	**0.5%**	**2,778**	**0.3%**	**219**	**0.0%**	**0**	**0.2%**	**42**	**0.5%**	**3,040**
Clear Glass Bottles and Containers	0.4%	1,995	0.2%	109	0.0%	0	0.2%	40	0.3%	2,145
Green Glass Bottles and Containers	0.0%	134	0.2%	103	0.0%	0	0.0%	0	0.0%	237
Brown Glass Bottles and Containers	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.0%	2
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Flat Glass	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Glass	0.1%	649	0.0%	7	0.0%	0	0.0%	0	0.1%	656
Metal	**1.6%**	**9,132**	**0.8%**	**501**	**0.0%**	**0**	**42.0%**	**10,128**	**3.0%**	**19,761**
Tin/Steel Cans	0.4%	2,383	0.1%	66	0.0%	0	3.5%	836	0.5%	3,285
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	84	0.0%	0	0.0%	0	0.0%	0	0.0%	84
Other Ferrous	0.4%	2,245	0.1%	54	0.0%	0	32.4%	7,806	1.5%	10,106
Aluminum Cans	0.2%	924	0.6%	371	0.0%	0	5.8%	1,399	0.4%	2,694
Other Non-Ferrous	0.2%	1,285	0.0%	0	0.0%	0	0.4%	87	0.2%	1,372
Remainder/Composite Metal	0.4%	2,211	0.0%	10	0.0%	0	0.0%	0	0.3%	2,221
Electronics	**0.0%**	**269**	**1.8%**	**1,123**	**0.0%**	**0**	**5.1%**	**1,235**	**0.4%**	**2,628**
Brown Goods	0.0%	168	0.0%	0	0.0%	0	0.0%	0	0.0%	168
Computer-related Electronics	0.0%	102	1.8%	1,123	0.0%	0	3.3%	798	0.3%	2,023
Other Small Consumer Electronics	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	1.8%	437	0.1%	437
Plastic	**13.1%**	**73,717**	**6.4%**	**4,107**	**0.2%**	**18**	**16.5%**	**3,972**	**12.4%**	**81,814**
PETE Plastic Containers	0.7%	4,108	2.4%	1,541	0.0%	0	15.6%	3,767	1.4%	9,416
HDPE Plastic Containers	0.3%	1,513	0.0%	31	0.0%	0	0.8%	204	0.3%	1,748
Miscellaneous Plastic Containers	0.4%	2,006	0.7%	441	0.2%	18	0.0%	1	0.4%	2,465
Plastic Trash Bags	3.2%	18,121	0.0%	27	0.0%	0	0.0%	0	2.7%	18,147
Plastic Grocery and Other Merchandise Bags	0.2%	892	0.0%	23	0.0%	0	0.0%	0	0.1%	915
Non-Bag Commercial and Industrial Packaging Film	0.1%	783	0.1%	52	0.0%	0	0.0%	0	0.1%	835
Film Products	0.0%	0	0.4%	252	0.0%	0	0.0%	0	0.0%	252
Other Film - Other	2.0%	10,991	1.2%	767	0.0%	0	0.0%	0	1.8%	11,759
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	320	0.9%	594	0.0%	0	0.0%	0	0.1%	914
Durable Plastic Items - Other	0.9%	4,953	0.3%	205	0.0%	0	0.0%	0	0.8%	5,158
Remainder/Composite Plastic	5.3%	30,031	0.3%	174	0.0%	0	0.0%	0	4.6%	30,205
Other Organic	**48.1%**	**270,695**	**4.9%**	**3,105**	**93.9%**	**9,307**	**6.0%**	**1,455**	**43.1%**	**284,563**
Food	33.8%	189,957	0.4%	235	75.9%	7,521	2.0%	485	30.0%	198,197
Leaves and Grass	3.9%	22,109	0.0%	0	9.0%	893	4.0%	971	3.6%	23,973
Prunings and Trimmings	0.3%	1,663	4.2%	2,715	9.0%	893	0.0%	0	0.8%	5,271
Branches and Stumps	1.2%	6,479	0.0%	0	0.0%	0	0.0%	0	1.0%	6,479
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	1.9%	10,550	0.0%	0	0.0%	0	0.0%	0	1.6%	10,550
Carpet	3.0%	16,788	0.0%	0	0.0%	0	0.0%	0	2.5%	16,788
Remainder/Composite Organic	4.1%	23,150	0.2%	155	0.0%	0	0.0%	0	3.5%	23,305
Inerts and Other	**2.8%**	**15,923**	**0.4%**	**249**	**0.0%**	**0**	**0.0%**	**0**	**2.4%**	**16,172**
Concrete	0.2%	1,219	0.0%	0	0.0%	0	0.0%	0	0.2%	1,219
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	106	0.0%	0	0.0%	0	0.0%	0	0.0%	106
Clean Dimensional Lumber	0.1%	561	0.0%	0	0.0%	0	0.0%	0	0.1%	561
Clean Engineered Wood	0.1%	689	0.0%	0	0.0%	0	0.0%	0	0.1%	689
Clean Pallets & Crates	0.4%	2,398	0.0%	0	0.0%	0	0.0%	0	0.4%	2,398
Other Wood Waste	1.3%	7,516	0.0%	0	0.0%	0	0.0%	0	1.1%	7,516
Gypsum Board	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Rock, Soil and Fines	0.2%	1,095	0.0%	0	0.0%	0	0.0%	0	0.2%	1,095
Remainder/Composite Inerts and Other	0.4%	2,339	0.4%	249	0.0%	0	0.0%	0	0.4%	2,588
Household Hazardous Waste	**0.2%**	**1,268**	**0.0%**	**0**	**0.0%**	**0**	**0.1%**	**32**	**0.2%**	**1,300**
Paint	0.0%	62	0.0%	0	0.0%	0	0.0%	0	0.0%	62
Vehicle and Equipment Fluids	0.0%	102	0.0%	0	0.0%	0	0.0%	0	0.0%	102
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	74	0.0%	0	0.0%	0	0.1%	32	0.0%	106
Remainder/Composite Household Hazardous	0.2%	1,030	0.0%	0	0.0%	0	0.0%	0	0.2%	1,030
Special Waste	**0.0%**	**185**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**185**
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	185	0.0%	0	0.0%	0	0.0%	0	0.0%	185
Mixed Residue	**0.2%**	**1,404**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.2%**	**1,404**
Totals	**100.0%**	**562,442**	**100.0%**	**63,891**	**100.0%**	**9,909**	**100.0%**	**24,127**	**100.0%**	**660,368**
Streams Sampled	51		24		3		39		**117**	
TPEPY	0.43		0.05		0.01		0.02		**0.50**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Hotels & Lodging

Table 41 presents key findings for the Hotels & Lodging industry group (Group 4). Statewide, Group 4 disposed of more than 384,000 tons and diverted nearly 94,000 tons. Total generation was approximately 2.14 TPEPY. *Food* was the most prevalent divertible material type in the Group 4 Disposed stream, accounting for 32 percent of disposal. Hotels & Lodging had the fewest employees among the industry groups studied.

Table 41. Key Findings and Metrics: Hotels & Lodging

Hotels & Lodging				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.72	0.42	384,327	93,712	20%
Top Three Diversion Opportunities in Disposed Stream				
• Food (32%, 123,483 tons) • Remainder/Composite Paper - Compostable (9%, 34,549 tons) • Other Miscellaneous Paper - Other (3%, 10,188 tons)				

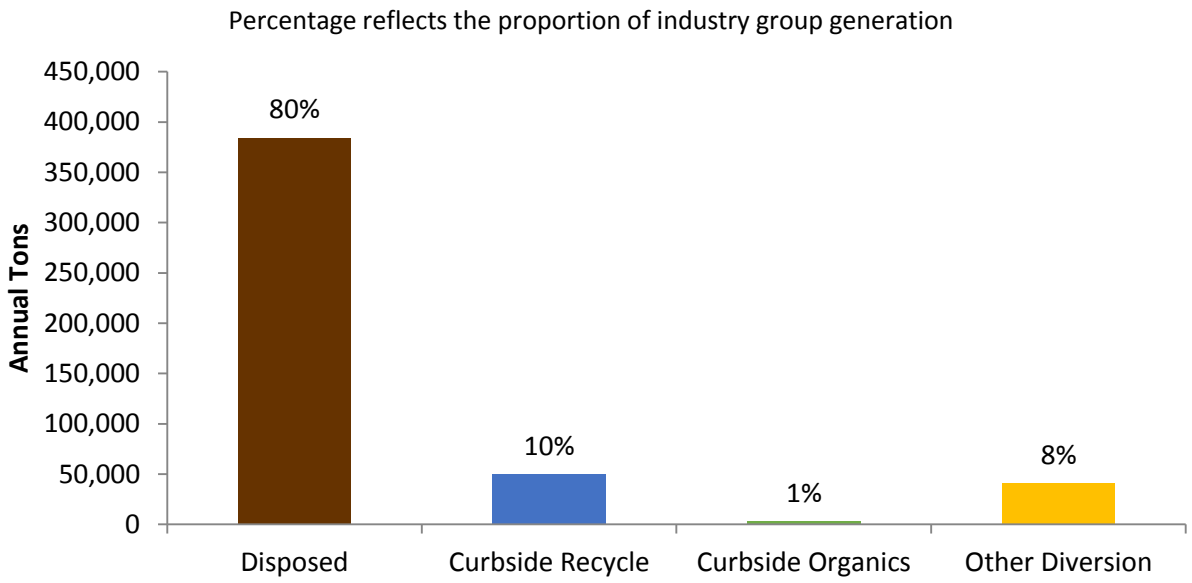
In addition to normalizing generation on a per employee basis (TPEPY), the project team normalized generation by the number of guest rooms at each generator site. As shown in Table 42, Group 4 businesses generated an estimated 1.31 tons per guest room per year. The number of sites used in this calculation is noted in Table 98 in Appendix C: Description of Calculations.

Table 42. Generation Rate Summary by Weight: Hotels & Lodging (tons per guest room per year)

Tons per Guest Room per Year	**Disposed**	**Curbside Recycle**	**Curbside Organics**	**Other Diversion**	**Generation**
Hotels & Lodging	0.94	0.17	0.01	0.18	**1.31**

Figure 20 presents the annual tons for each stream in Group 4. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately 80 percent of total generation at Group 4 businesses went to the Disposed stream.

Figure 20. Annual Tons by Waste Stream: Hotels & Lodging



Each stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 21 breaks down the potential recoverability (by recoverability group) for each stream in Group 4. As shown, more than three-quarters of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 4 Curbside Recycle contamination rate was 43 percent, largely due to pallets and crates in the recycling bins. No contamination was observed in the Curbside Organics stream.

Figure 21. Recoverability by Stream: Hotels & Lodging

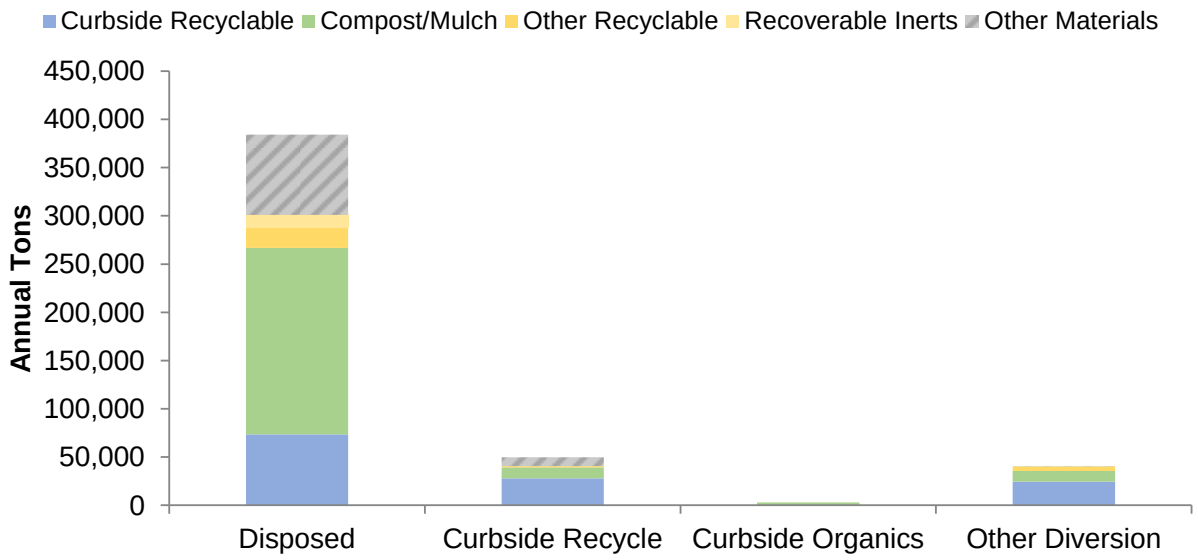


Figure 22 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 22 illustrates, approximately 46 percent of total generation in Group 4 was material in the **Compost/Mulch** recoverability group, and approximately 27 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 81 percent of the Group 4 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 22. Recoverability of Materials Generated in the Hotels & Lodging Sector

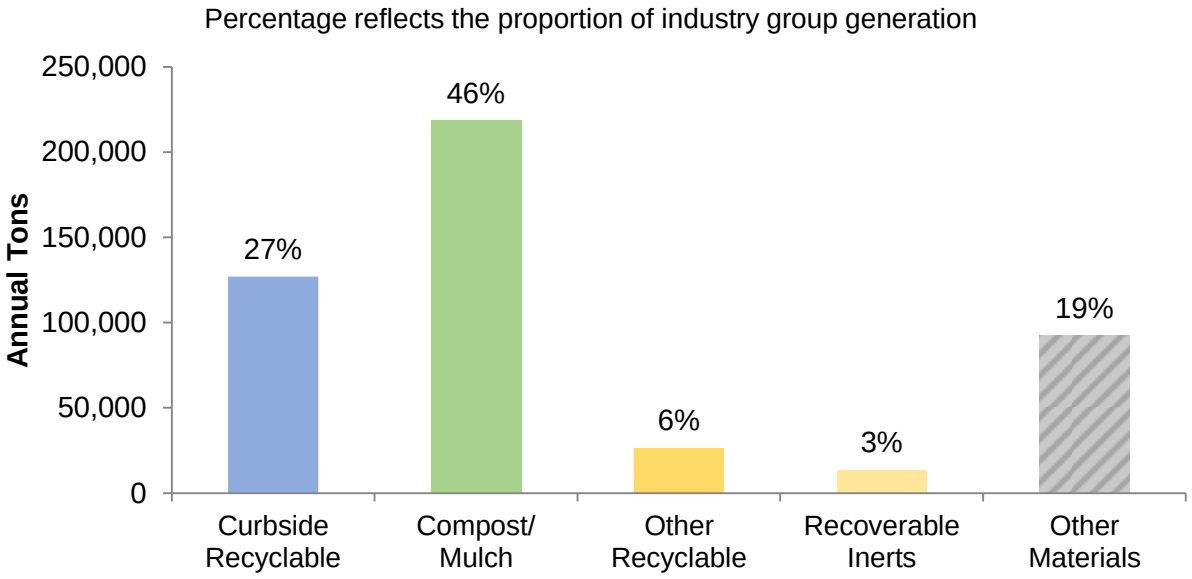


Table 43 presents detailed composition results for each stream in Group 4, as well as for the total group generation.

Table 43. Composition Summary: Hotels & Lodging

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**22.3%**	**85,791**	**49.2%**	**24,543**	**0.0%**	**0**	**31.3%**	**12,689**	**25.7%**	**123,023**
Uncoated Corrugated Cardboard	2.0%	7,538	29.5%	14,729	0.0%	0	30.5%	12,347	7.2%	34,614
Paper Bags	0.5%	1,815	0.4%	189	0.0%	0	0.0%	0	0.4%	2,005
Newspaper	2.6%	10,001	4.4%	2,190	0.0%	0	0.0%	0	2.6%	12,191
White Ledger Paper	0.9%	3,596	1.6%	779	0.0%	0	0.0%	0	0.9%	4,375
Other Office Paper	0.9%	3,463	3.5%	1,725	0.0%	0	0.0%	0	1.1%	5,188
Magazines and Catalogs	0.6%	2,287	3.5%	1,762	0.0%	0	0.0%	0	0.8%	4,049
Phone Books and Directories	0.1%	291	0.0%	0	0.0%	0	0.0%	0	0.1%	291
Other Miscellaneous Paper - Compostable	0.8%	3,106	1.2%	596	0.0%	0	0.0%	0	0.8%	3,701
Other Miscellaneous Paper - Other	2.7%	10,188	2.7%	1,331	0.0%	0	0.0%	0	2.4%	11,519
Remainder/Composite Paper - Compostable	9.0%	34,549	0.8%	412	0.0%	0	0.8%	342	7.4%	35,303
Remainder/Composite Paper - Other	2.3%	8,957	1.7%	831	0.0%	0	0.0%	0	2.0%	9,788
Glass	**6.7%**	**25,897**	**7.9%**	**3,932**	**0.0%**	**0**	**25.1%**	**10,148**	**8.4%**	**39,978**
Clear Glass Bottles and Containers	1.9%	7,378	2.5%	1,272	0.0%	0	22.5%	9,091	3.7%	17,741
Green Glass Bottles and Containers	2.4%	9,318	3.2%	1,615	0.0%	0	0.2%	86	2.3%	11,019
Brown Glass Bottles and Containers	1.1%	4,235	2.1%	1,040	0.0%	0	2.4%	971	1.3%	6,245
Other Glass Colored Bottles and Containers	0.1%	328	0.0%	0	0.0%	0	0.0%	0	0.1%	328
Flat Glass	0.4%	1,657	0.0%	6	0.0%	0	0.0%	0	0.3%	1,663
Remainder/Composite Glass	0.8%	2,981	0.0%	0	0.0%	0	0.0%	0	0.6%	2,981
Metal	**4.1%**	**15,621**	**2.1%**	**1,032**	**0.0%**	**0**	**10.3%**	**4,168**	**4.4%**	**20,821**
Tin/Steel Cans	1.1%	4,138	0.2%	91	0.0%	0	0.0%	0	0.9%	4,229
Major Appliances	0.6%	2,188	0.0%	0	0.0%	0	0.0%	0	0.5%	2,188
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Ferrous	0.5%	2,012	1.3%	666	0.0%	0	8.2%	3,307	1.3%	5,985
Aluminum Cans	0.3%	1,241	0.2%	87	0.0%	0	2.1%	858	0.5%	2,187
Other Non-Ferrous	0.4%	1,713	0.3%	165	0.0%	0	0.0%	0	0.4%	1,878
Remainder/Composite Metal	1.1%	4,329	0.0%	23	0.0%	0	0.0%	3	0.9%	4,355
Electronics	**0.0%**	**63**	**0.0%**	**25**	**0.0%**	**0**	**2.3%**	**915**	**0.2%**	**1,003**
Brown Goods	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.0%	3
Computer-related Electronics	0.0%	25	0.0%	0	0.0%	0	2.2%	889	0.2%	915
Other Small Consumer Electronics	0.0%	38	0.0%	25	0.0%	0	0.0%	0	0.0%	63
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	0.1%	23	0.0%	23
Plastic	**11.2%**	**43,226**	**11.5%**	**5,753**	**0.0%**	**0**	**3.6%**	**1,454**	**10.6%**	**50,434**
PETE Plastic Containers	1.0%	3,873	1.5%	745	0.0%	0	3.2%	1,300	1.2%	5,918
HDPE Plastic Containers	0.7%	2,625	1.3%	635	0.0%	0	0.2%	74	0.7%	3,335
Miscellaneous Plastic Containers	0.4%	1,465	0.2%	107	0.0%	0	0.2%	80	0.3%	1,652
Plastic Trash Bags	2.8%	10,766	0.7%	364	0.0%	0	0.0%	0	2.3%	11,130
Plastic Grocery and Other Merchandise Bags	0.3%	1,196	0.1%	44	0.0%	0	0.0%	0	0.3%	1,239
Non-Bag Commercial and Industrial Packaging Film	0.1%	272	0.1%	37	0.0%	0	0.0%	0	0.1%	309
Film Products	0.0%	49	0.0%	8	0.0%	0	0.0%	0	0.0%	56
Other Film - Other	1.7%	6,637	3.8%	1,890	0.0%	0	0.0%	0	1.8%	8,528
Durable Plastic Items - #2 and #5 Bulky Rigids	0.3%	1,104	0.7%	374	0.0%	0	0.0%	0	0.3%	1,478
Durable Plastic Items - Other	0.4%	1,694	2.1%	1,051	0.0%	0	0.0%	0	0.6%	2,745
Remainder/Composite Plastic	3.5%	13,546	1.0%	498	0.0%	0	0.0%	0	2.9%	14,044
Other Organic	**45.5%**	**174,892**	**5.4%**	**2,700**	**100.0%**	**3,293**	**27.1%**	**10,981**	**40.1%**	**191,867**
Food	32.1%	123,483	5.2%	2,605	54.0%	1,780	13.6%	5,496	27.9%	133,363
Leaves and Grass	2.1%	8,042	0.0%	0	25.0%	822	0.0%	0	1.9%	8,865
Prunings and Trimmings	2.1%	8,248	0.0%	0	21.0%	691	12.7%	5,136	2.9%	14,075
Branches and Stumps	1.7%	6,635	0.0%	0	0.0%	0	0.0%	0	1.4%	6,635
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	2.6%	9,941	0.2%	96	0.0%	0	0.9%	350	2.2%	10,387
Carpet	0.5%	1,909	0.0%	0	0.0%	0	0.0%	0	0.4%	1,909
Remainder/Composite Organic	4.3%	16,634	0.0%	0	0.0%	0	0.0%	0	3.5%	16,634
Inerts and Other	**8.5%**	**32,718**	**23.8%**	**11,897**	**0.0%**	**0**	**0.0%**	**0**	**9.3%**	**44,615**
Concrete	0.2%	656	0.0%	0	0.0%	0	0.0%	0	0.1%	656
Asphalt Paving	1.7%	6,692	0.0%	0	0.0%	0	0.0%	0	1.4%	6,692
Asphalt Roofing	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Dimensional Lumber	0.1%	264	0.6%	286	0.0%	0	0.0%	0	0.1%	551
Clean Engineered Wood	0.1%	376	0.0%	0	0.0%	0	0.0%	0	0.1%	376
Clean Pallets & Crates	2.2%	8,476	14.5%	7,230	0.0%	0	0.0%	0	3.3%	15,706
Other Wood Waste	1.1%	4,225	0.0%	0	0.0%	0	0.0%	0	0.9%	4,225
Gypsum Board	1.4%	5,542	0.0%	0	0.0%	0	0.0%	0	1.2%	5,542
Rock, Soil and Fines	0.2%	635	0.0%	0	0.0%	0	0.0%	0	0.1%	635
Remainder/Composite Inerts and Other	1.5%	5,852	8.8%	4,381	0.0%	0	0.0%	0	2.1%	10,233
Household Hazardous Waste	**0.1%**	**207**	**0.0%**	**6**	**0.0%**	**0**	**0.2%**	**73**	**0.1%**	**286**
Paint	0.0%	46	0.0%	0	0.0%	0	0.0%	0	0.0%	46
Vehicle and Equipment Fluids	0.0%	6	0.0%	0	0.0%	0	0.0%	0	0.0%	6
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	40	0.0%	1	0.0%	0	0.2%	73	0.0%	114
Remainder/Composite Household Hazardous	0.0%	115	0.0%	5	0.0%	0	0.0%	0	0.0%	120
Special Waste	**1.1%**	**4,362**	**0.1%**	**40**	**0.0%**	**0**	**0.0%**	**0**	**0.9%**	**4,402**
Ash	0.8%	2,926	0.0%	0	0.0%	0	0.0%	0	0.6%	2,926
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	0.4%	1,407	0.0%	0	0.0%	0	0.0%	0	0.3%	1,407
Tires	0.0%	0	0.1%	40	0.0%	0	0.0%	0	0.0%	40
Remainder/Composite Special Waste	0.0%	29	0.0%	0	0.0%	0	0.0%	0	0.0%	29
Mixed Residue	**0.4%**	**1,550**	**0.0%**	**0**	**0.0%**	**0**	**0.1%**	**60**	**0.3%**	**1,610**
Totals	**100.0%**	**384,327**	**100.0%**	**49,930**	**100.0%**	**3,293**	**100.0%**	**40,489**	**100.0%**	**478,039**
Streams Sampled	51		23		3		41		**118**	
TPEPY	1.72		0.22		0.01		0.18		**2.14**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Manufacturing – Electronic Equipment

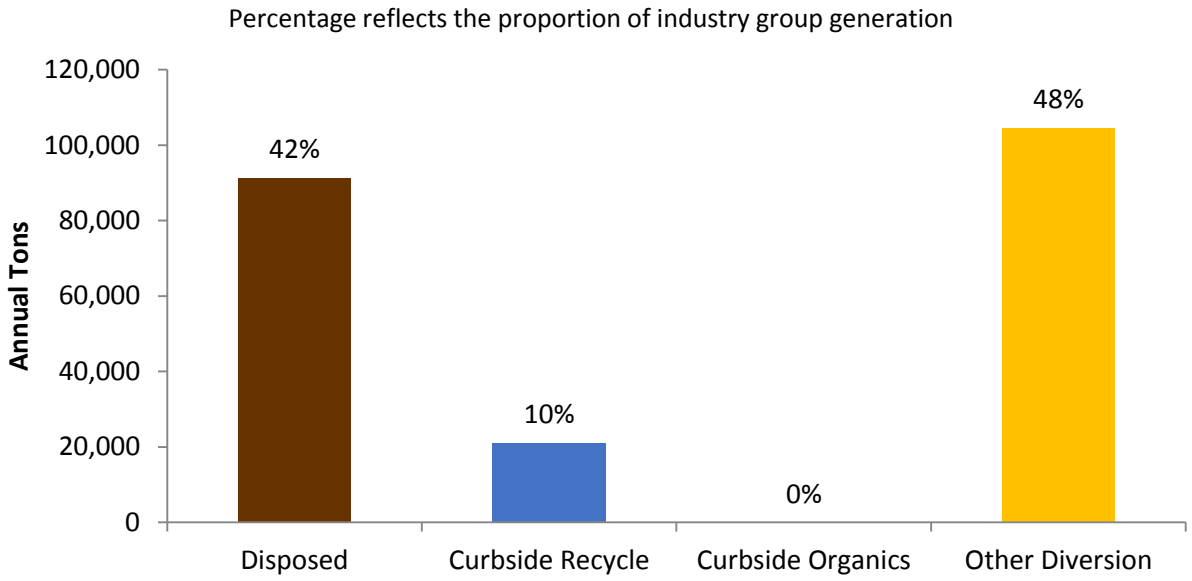
Table 44 presents key findings for the Manufacturing – Electronic Equipment industry group (Group 5). This group includes businesses manufacturing physical goods such as computers, radios, computing and memory chips, transformers, electrical appliances, and batteries, but it does not include software developers. Statewide, Group 5 disposed of more than 91,000 tons and diverted nearly 126,000 tons for a total generation rate of approximately 0.75 TPEPY. By weight, Group 5 accounted for less than 1 percent of the overall commercial sector generation, making it the smallest group (by generation) in the state. *Remainder/composite paper – compostable* was the most prevalent divertible material type in the Disposed stream at 13 percent of disposal. Manufacturing – Electronic Equipment had the least dense Disposed stream, approximately 70 pounds per cubic yard. This correlates with the qualitative observations by the field crew that many of these businesses had primarily plastic film and Styrofoam packing materials in their waste bins.

Table 44. Key Findings and Metrics: Manufacturing – Electronic Equipment

Manufacturing - Electronic Equipment				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.31	0.43	91,265	125,666	58%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (13%, 11,945 tons) • Food (11%, 10,310 tons) • Clean Pallets & Crates (11%, 9,598 tons)				

Figure 23 presents the annual tons for each stream in Group 5. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. Nearly half (48 percent) of Group 5 generation can be attributed to the Other Diversion stream. Group 5 generators sell large quantities of scrap metal directly to recyclers.

Figure 23. Annual Tons by Waste Stream: Manufacturing – Electronic Equipment



Each stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 24 breaks down the potential recoverability (by recoverability group) for each stream in Group 5. As shown, **Compost/Mulch** materials were the largest fraction in the Disposed stream, and Other Recyclable materials (including scrap metal) was the largest part of the Other Diversion stream.

The Group 5 Curbside Recycle contamination rate was 10 percent. The study did not include any sites from this group with Curbside Organics.

Figure 24. Recoverability by Stream: Manufacturing – Electronic Equipment

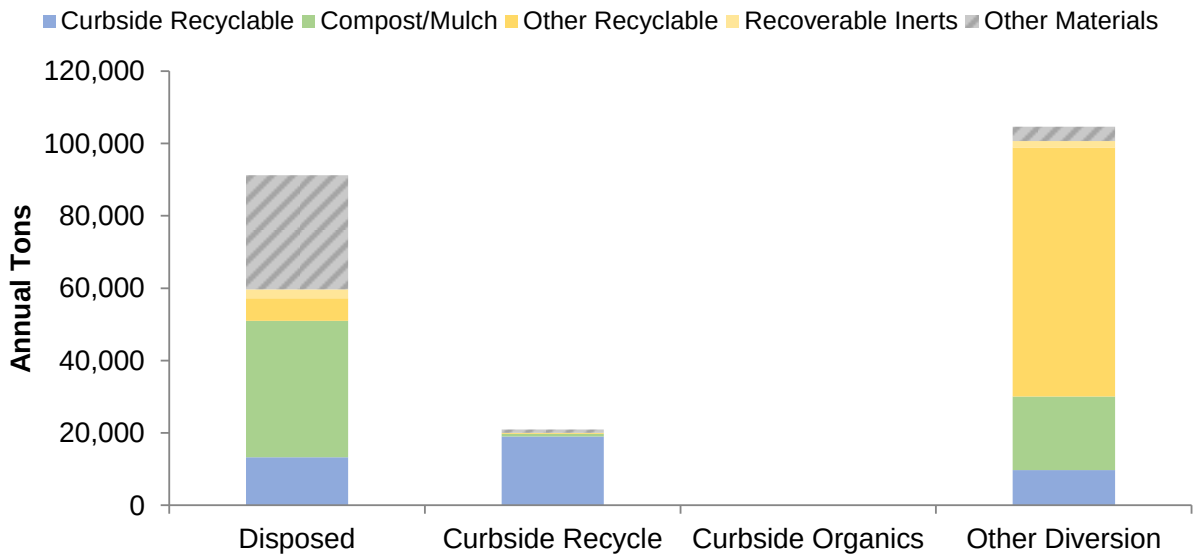


Figure 25 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 25 illustrates, approximately 35 percent of total generation in Group 5 was material in the **Other Recyclable** recoverability group, and approximately 27 percent was **Compost/Mulch**. When combined, divertible materials accounted for roughly 83 percent of the Group 5 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 25. Recoverability of Materials Generated in the Manufacturing – Electronic Equipment Sector

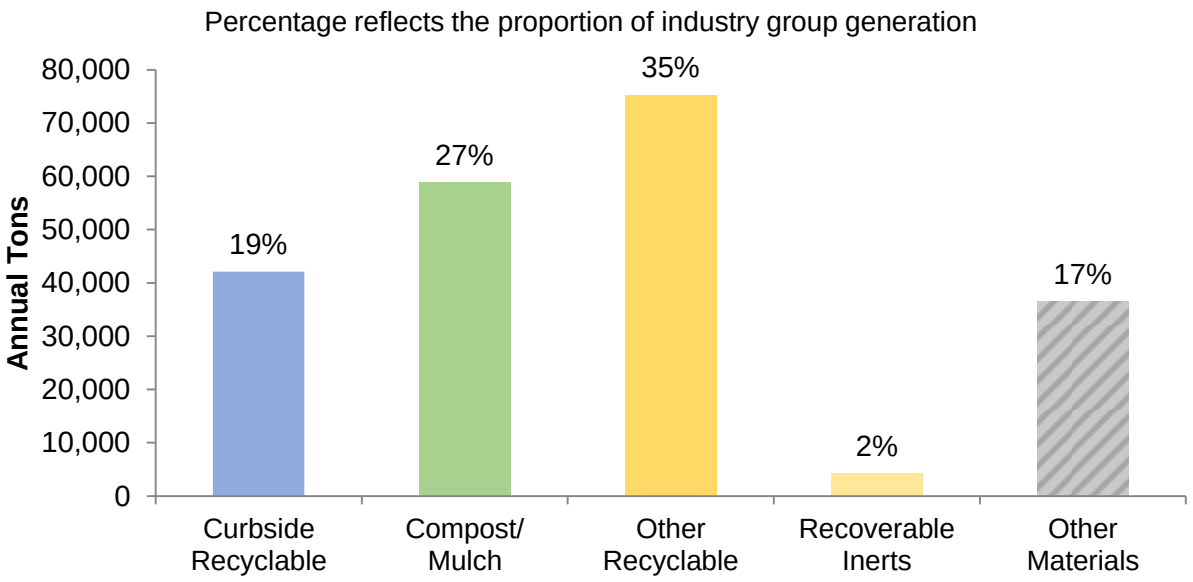


Table 45 presents detailed composition results for each stream in Group 5, as well as for the total group generation.

Table 45. Composition Summary: Manufacturing – Electronic Equipment

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**30.1%**	**27,438**	**93.8%**	**19,709**	**-**	**-**	**6.8%**	**7,071**	**25.0%**	**54,218**
Uncoated Corrugated Cardboard	3.2%	2,928	81.8%	17,203	-	-	5.2%	5,415	11.8%	25,546
Paper Bags	0.3%	251	2.1%	451	-	-	0.0%	36	0.3%	739
Newspaper	1.6%	1,415	0.1%	24	-	-	0.2%	231	0.8%	1,670
White Ledger Paper	2.4%	2,214	1.7%	347	-	-	0.3%	331	1.3%	2,892
Other Office Paper	1.8%	1,661	2.3%	476	-	-	0.3%	307	1.1%	2,444
Magazines and Catalogs	0.7%	670	0.7%	138	-	-	0.1%	106	0.4%	914
Phone Books and Directories	0.0%	14	0.0%	0	-	-	0.0%	0	0.0%	14
Other Miscellaneous Paper - Compostable	0.9%	819	2.8%	597	-	-	0.0%	4	0.7%	1,419
Other Miscellaneous Paper - Other	2.9%	2,679	0.8%	164	-	-	0.4%	415	1.5%	3,258
Remainder/Composite Paper - Compostable	13.1%	11,945	0.8%	166	-	-	0.2%	225	5.7%	12,336
Remainder/Composite Paper - Other	3.1%	2,841	0.7%	143	-	-	0.0%	1	1.4%	2,985
Glass	**0.3%**	**261**	**0.3%**	**58**	**-**	**-**	**0.1%**	**77**	**0.2%**	**396**
Clear Glass Bottles and Containers	0.2%	204	0.0%	5	-	-	0.1%	70	0.1%	279
Green Glass Bottles and Containers	0.0%	5	0.1%	30	-	-	0.0%	0	0.0%	35
Brown Glass Bottles and Containers	0.0%	4	0.1%	24	-	-	0.0%	7	0.0%	35
Other Glass Colored Bottles and Containers	0.0%	8	0.0%	0	-	-	0.0%	0	0.0%	8
Flat Glass	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Remainder/Composite Glass	0.0%	40	0.0%	0	-	-	0.0%	0	0.0%	40
Metal	**3.8%**	**3,458**	**0.1%**	**24**	**-**	**-**	**65.0%**	**68,050**	**33.0%**	**71,533**
Tin/Steel Cans	0.2%	138	0.0%	5	-	-	0.1%	85	0.1%	227
Major Appliances	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Used Oil Filters	0.0%	9	0.0%	0	-	-	0.0%	0	0.0%	9
Other Ferrous	0.8%	689	0.0%	3	-	-	29.4%	30,726	14.5%	31,418
Aluminum Cans	0.1%	117	0.0%	2	-	-	0.0%	42	0.1%	161
Other Non-Ferrous	1.4%	1,235	0.0%	1	-	-	35.4%	37,072	17.7%	38,307
Remainder/Composite Metal	1.4%	1,271	0.1%	13	-	-	0.1%	125	0.6%	1,410
Electronics	**1.5%**	**1,381**	**0.0%**	**0**	**-**	**-**	**2.5%**	**2,633**	**1.9%**	**4,014**
Brown Goods	1.2%	1,115	0.0%	0	-	-	1.6%	1,627	1.3%	2,742
Computer-related Electronics	0.2%	176	0.0%	0	-	-	0.7%	689	0.4%	866
Other Small Consumer Electronics	0.0%	8	0.0%	0	-	-	0.0%	20	0.0%	28
Video Display Devices	0.1%	81	0.0%	0	-	-	0.3%	296	0.2%	378
Plastic	**18.8%**	**17,115**	**5.6%**	**1,184**	**-**	**-**	**4.2%**	**4,348**	**10.4%**	**22,647**
PETE Plastic Containers	0.2%	217	0.4%	87	-	-	0.0%	47	0.2%	351
HDPE Plastic Containers	0.3%	311	0.1%	26	-	-	0.0%	37	0.2%	375
Miscellaneous Plastic Containers	0.5%	457	0.2%	36	-	-	2.6%	2,677	1.5%	3,170
Plastic Trash Bags	2.3%	2,136	0.1%	29	-	-	0.0%	12	1.0%	2,177
Plastic Grocery and Other Merchandise Bags	0.1%	98	0.0%	3	-	-	0.0%	0	0.0%	101
Non-Bag Commercial and Industrial Packaging Film	1.5%	1,389	0.3%	63	-	-	0.0%	0	0.7%	1,452
Film Products	0.2%	206	0.0%	7	-	-	0.0%	0	0.1%	213
Other Film - Other	2.9%	2,645	0.9%	182	-	-	0.0%	6	1.3%	2,833
Durable Plastic Items - #2 and #5 Bulky Rigids	0.3%	275	0.8%	171	-	-	0.0%	2	0.2%	449
Durable Plastic Items - Other	3.3%	2,967	0.0%	0	-	-	1.5%	1,561	2.1%	4,528
Remainder/Composite Plastic	7.0%	6,414	2.8%	580	-	-	0.0%	5	3.2%	6,999
Other Organic	**21.3%**	**19,479**	**0.2%**	**44**	**-**	**-**	**5.1%**	**5,388**	**11.5%**	**24,911**
Food	11.3%	10,310	0.1%	31	-	-	1.9%	1,981	5.7%	12,321
Leaves and Grass	2.8%	2,524	0.0%	0	-	-	2.6%	2,676	2.4%	5,200
Prunings and Trimmings	0.6%	518	0.0%	0	-	-	0.5%	572	0.5%	1,089
Branches and Stumps	0.0%	4	0.0%	0	-	-	0.2%	160	0.1%	163
Manures	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Textiles	1.8%	1,618	0.0%	3	-	-	0.0%	0	0.7%	1,621
Carpet	0.1%	70	0.0%	0	-	-	0.0%	0	0.0%	70
Remainder/Composite Organic	4.9%	4,436	0.0%	10	-	-	0.0%	0	2.0%	4,446
Inerts and Other	**20.7%**	**18,935**	**0.0%**	**0**	**-**	**-**	**16.1%**	**16,845**	**16.5%**	**35,780**
Concrete	0.5%	413	0.0%	0	-	-	0.3%	318	0.3%	731
Asphalt Paving	0.0%	45	0.0%	0	-	-	0.0%	0	0.0%	45
Asphalt Roofing	0.4%	391	0.0%	0	-	-	0.0%	0	0.2%	391
Clean Dimensional Lumber	2.0%	1,867	0.0%	0	-	-	2.4%	2,501	2.0%	4,367
Clean Engineered Wood	0.2%	152	0.0%	0	-	-	0.0%	0	0.1%	152
Clean Pallets & Crates	10.5%	9,598	0.0%	0	-	-	11.7%	12,211	10.1%	21,809
Other Wood Waste	4.4%	4,057	0.0%	0	-	-	0.4%	415	2.1%	4,472
Gypsum Board	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Rock, Soil and Fines	1.8%	1,603	0.0%	0	-	-	1.3%	1,400	1.4%	3,003
Remainder/Composite Inerts and Other	0.9%	811	0.0%	0	-	-	0.0%	0	0.4%	811
Household Hazardous Waste	**0.8%**	**755**	**0.0%**	**0**	**-**	**-**	**0.0%**	**0**	**0.3%**	**755**
Paint	0.5%	456	0.0%	0	-	-	0.0%	0	0.2%	456
Vehicle and Equipment Fluids	0.0%	12	0.0%	0	-	-	0.0%	0	0.0%	12
Used Oil	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Batteries	0.1%	99	0.0%	0	-	-	0.0%	0	0.0%	99
Remainder/Composite Household Hazardous	0.2%	189	0.0%	0	-	-	0.0%	0	0.1%	189
Special Waste	**2.7%**	**2,444**	**0.0%**	**0**	**-**	**-**	**0.2%**	**234**	**1.2%**	**2,678**
Ash	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Bulky Items	2.7%	2,442	0.0%	0	-	-	0.2%	234	1.2%	2,676
Tires	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	1	0.0%	0	-	-	0.0%	0	0.0%	1
Mixed Residue	**0.0%**	**0**	**0.0%**	**0**	**-**	**-**	**0.0%**	**0**	**0.0%**	**0**
Totals	**100.0%**	**91,265**	**100.0%**	**21,020**	**-**	**-**	**100.0%**	**104,646**	**100.0%**	**216,931**
Streams Sampled	51		19		0		72		**142**	
TPEPY	0.31		0.07		0.00		0.36		**0.75**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Manufacturing – Food & Nondurable Wholesale

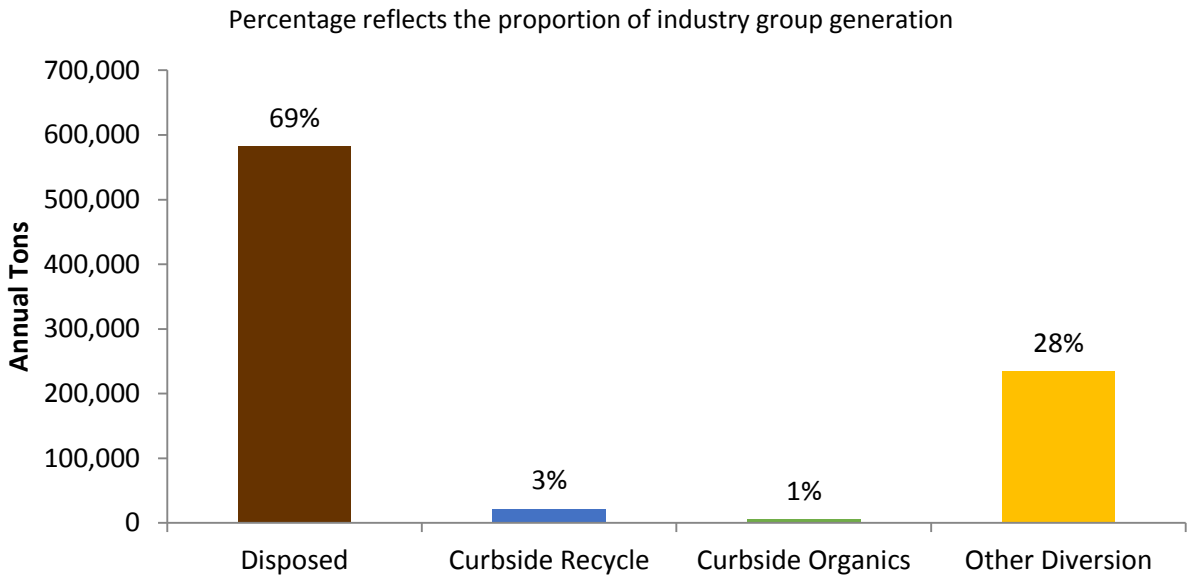
Table 46 presents key findings for the Manufacturing – Food & Nondurable Wholesale industry group (Group 6). This group consists of manufacturers of food, beverages, and tobacco products; and wholesalers of non-durable goods such as paper, apparel, groceries, and chemicals. Statewide, Group 6 disposed of more than 582,000 tons and diverted nearly 262,000 tons. Total generation was approximately 1.85 TPEPY. *Food* was the most prevalent divertible material type in the Group 6 Disposed stream, accounting for 38 percent of disposal.

Table 46. Key Findings and Metrics: Manufacturing – Food & Nondurable Wholesale

Manufacturing - Food & Nondurable Wholesale				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.28	0.57	582,486	261,646	31%
Top Three Diversion Opportunities in Disposed Stream				
• Food (38%, 220,403 tons) • Remainder/Composite Paper - Compostable (8%, 45,184 tons) • Clean Pallets & Crates (4%, 23,205 tons)				

Figure 26 presents the annual tons for each stream in Group 6. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means, such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams, such as food in recycling bins or glass in organics bins. The curbside diversion streams combined were approximately 4 percent of generation, and Other Diversion was an additional 28 percent. Approximately 68 percent of the Other Diversion stream was *food*. Many of the generators in this group back-haul or self-haul their organics for animal feed, composting, or anaerobic digestion.

Figure 26. Annual Tons by Waste Stream: Manufacturing – Food & Nondurable Wholesale



Each stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 27 breaks down the potential recoverability (by recoverability group) for each stream in Group 6. As shown, more than three-quarters of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 6 Curbside Recycle contamination rate was 14 percent, and the Curbside Organics contamination rate was 6 percent.

Figure 27. Recoverability by Stream: Manufacturing – Food & Nondurable Wholesale

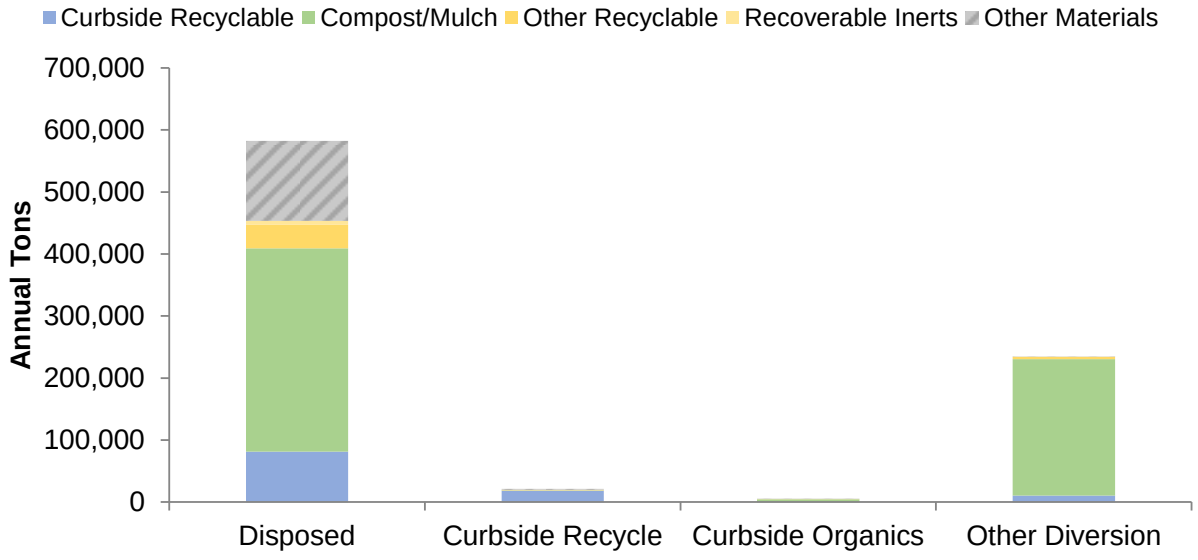


Figure 28 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 28 illustrates, two-thirds of total generation in Group 6 was material in the **Compost/Mulch** recoverability group. **Other Materials** and **Curbside Recyclable** accounted for 15 percent and 13 percent of total generation, respectively. When combined, divertible materials accounted for roughly 85 percent of the Group 6 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 28. Recoverability of Materials Generated in the Manufacturing – Food & Nondurable Wholesale Sector

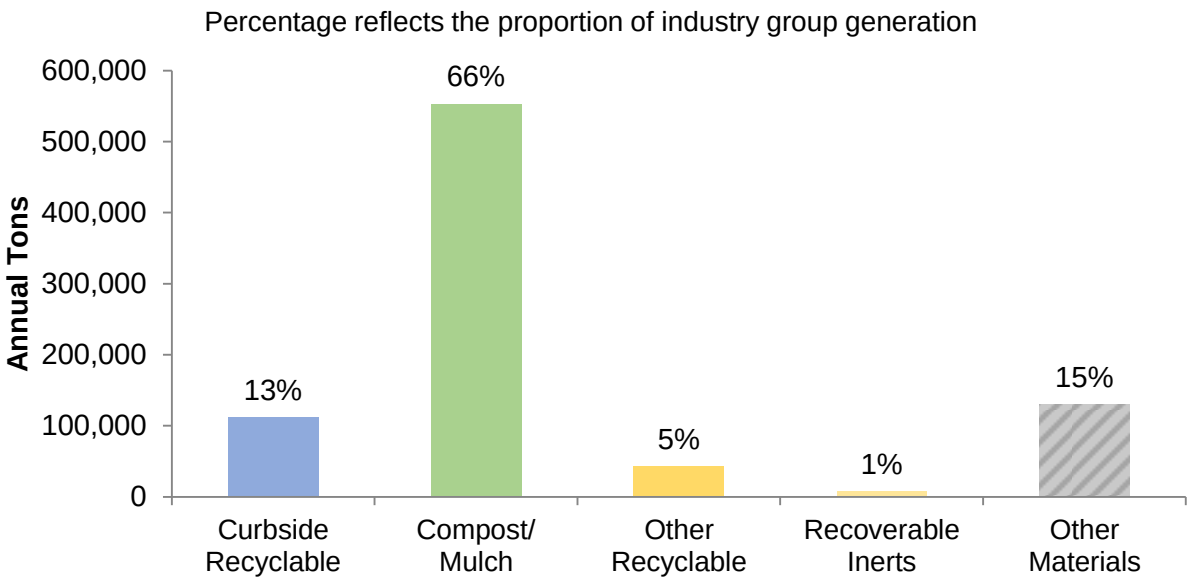


Table 47 presents detailed composition results for each stream in Group 6, as well as for the total group generation.

Table 47. Composition Summary: Manufacturing – Food & Nondurable Wholesale

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**23.1%**	**134,277**	**69.2%**	**15,058**	**2.2%**	**119**	**4.5%**	**10,666**	**19.0%**	**160,121**
Uncoated Corrugated Cardboard	3.4%	19,650	42.1%	9,158	0.0%	0	4.3%	10,192	4.6%	39,000
Paper Bags	0.4%	2,049	0.3%	67	0.0%	0	0.0%	2	0.3%	2,118
Newspaper	0.8%	4,523	1.5%	327	0.0%	0	0.0%	0	0.6%	4,850
White Ledger Paper	1.2%	7,177	6.8%	1,477	0.0%	0	0.0%	63	1.0%	8,716
Other Office Paper	1.5%	8,568	2.6%	573	0.0%	0	0.0%	28	1.1%	9,169
Magazines and Catalogs	0.4%	2,162	5.2%	1,135	0.0%	0	0.0%	0	0.4%	3,297
Phone Books and Directories	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Miscellaneous Paper - Compostable	0.7%	4,187	1.0%	209	1.8%	95	0.0%	0	0.5%	4,491
Other Miscellaneous Paper - Other	3.3%	19,170	8.1%	1,769	0.2%	10	0.2%	381	2.5%	21,331
Remainder/Composite Paper - Compostable	7.8%	45,184	0.2%	40	0.3%	14	0.0%	0	5.4%	45,237
Remainder/Composite Paper - Other	3.7%	21,607	1.4%	304	0.0%	0	0.0%	0	2.6%	21,911
Glass	**1.4%**	**8,216**	**11.6%**	**2,526**	**0.0%**	**0**	**0.0%**	**0**	**1.3%**	**10,743**
Clear Glass Bottles and Containers	0.8%	4,680	3.7%	804	0.0%	0	0.0%	0	0.6%	5,484
Green Glass Bottles and Containers	0.2%	1,252	5.4%	1,180	0.0%	0	0.0%	0	0.3%	2,432
Brown Glass Bottles and Containers	0.2%	994	1.4%	299	0.0%	0	0.0%	0	0.2%	1,294
Other Glass Colored Bottles and Containers	0.0%	0	1.1%	243	0.0%	0	0.0%	0	0.0%	243
Flat Glass	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Glass	0.2%	1,291	0.0%	0	0.0%	0	0.0%	0	0.2%	1,291
Metal	**1.5%**	**8,868**	**0.5%**	**102**	**0.1%**	**4**	**1.1%**	**2,538**	**1.4%**	**11,512**
Tin/Steel Cans	0.5%	2,697	0.1%	30	0.0%	0	0.0%	36	0.3%	2,762
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	11	0.0%	0	0.0%	0	0.0%	0	0.0%	11
Other Ferrous	0.1%	703	0.2%	33	0.0%	0	1.1%	2,495	0.4%	3,232
Aluminum Cans	0.1%	642	0.1%	32	0.0%	0	0.0%	7	0.1%	681
Other Non-Ferrous	0.3%	1,833	0.0%	7	0.0%	0	0.0%	0	0.2%	1,840
Remainder/Composite Metal	0.5%	2,982	0.0%	0	0.1%	4	0.0%	0	0.4%	2,986
Electronics	**0.8%**	**4,583**	**0.0%**	**4**	**0.0%**	**0**	**0.0%**	**108**	**0.6%**	**4,695**
Brown Goods	0.7%	3,872	0.0%	0	0.0%	0	0.0%	0	0.5%	3,872
Computer-related Electronics	0.0%	218	0.0%	0	0.0%	0	0.0%	106	0.0%	324
Other Small Consumer Electronics	0.1%	493	0.0%	4	0.0%	0	0.0%	0	0.1%	497
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.0%	1
Plastic	**17.0%**	**99,055**	**17.7%**	**3,849**	**0.0%**	**0**	**0.2%**	**555**	**12.3%**	**103,459**
PETE Plastic Containers	0.5%	2,751	6.7%	1,462	0.0%	0	0.0%	2	0.5%	4,215
HDPE Plastic Containers	0.3%	1,867	0.2%	41	0.0%	0	0.0%	0	0.2%	1,909
Miscellaneous Plastic Containers	0.6%	3,413	0.9%	196	0.0%	0	0.0%	0	0.4%	3,609
Plastic Trash Bags	1.6%	9,153	0.2%	40	0.0%	0	0.0%	0	1.1%	9,193
Plastic Grocery and Other Merchandise Bags	0.1%	461	0.1%	27	0.0%	0	0.0%	0	0.1%	487
Non-Bag Commercial and Industrial Packaging Film	3.9%	22,574	3.4%	736	0.0%	0	0.0%	0	2.8%	23,309
Film Products	0.0%	0	0.6%	121	0.0%	0	0.0%	51	0.0%	171
Other Film - Other	5.6%	32,594	0.6%	137	0.0%	0	0.0%	0	3.9%	32,731
Durable Plastic Items - #2 and #5 Bulky Rigids	0.7%	4,167	1.5%	337	0.0%	0	0.2%	503	0.6%	5,007
Durable Plastic Items - Other	0.3%	2,006	2.6%	569	0.0%	0	0.0%	0	0.3%	2,575
Remainder/Composite Plastic	3.4%	20,070	0.8%	183	0.0%	0	0.0%	0	2.4%	20,253
Other Organic	**47.1%**	**274,475**	**0.9%**	**207**	**92.0%**	**4,958**	**71.2%**	**166,880**	**52.9%**	**446,519**
Food	37.8%	220,403	0.7%	155	89.4%	4,821	68.1%	159,682	45.6%	385,062
Leaves and Grass	3.8%	22,170	0.0%	5	2.5%	136	3.1%	7,197	3.5%	29,509
Prunings and Trimmings	0.1%	837	0.0%	2	0.0%	0	0.0%	0	0.1%	839
Branches and Stumps	0.3%	1,878	0.0%	0	0.0%	0	0.0%	0	0.2%	1,878
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	1.3%	7,473	0.2%	44	0.0%	0	0.0%	0	0.9%	7,517
Carpet	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Organic	3.7%	21,714	0.0%	0	0.0%	0	0.0%	0	2.6%	21,714
Inerts and Other	**8.1%**	**47,024**	**0.1%**	**22**	**5.8%**	**310**	**22.9%**	**53,660**	**12.0%**	**101,017**
Concrete	0.3%	1,768	0.0%	0	0.0%	0	0.0%	0	0.2%	1,768
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Dimensional Lumber	0.6%	3,330	0.1%	22	0.0%	0	0.0%	0	0.4%	3,352
Clean Engineered Wood	1.1%	6,332	0.0%	0	0.0%	0	0.0%	0	0.8%	6,332
Clean Pallets & Crates	4.0%	23,205	0.0%	0	0.0%	0	22.7%	53,288	9.1%	76,492
Other Wood Waste	1.1%	6,261	0.0%	0	0.0%	0	0.0%	0	0.7%	6,261
Gypsum Board	0.1%	393	0.0%	0	0.0%	0	0.0%	0	0.0%	393
Rock, Soil and Fines	0.8%	4,445	0.0%	0	5.8%	310	0.2%	373	0.6%	5,128
Remainder/Composite Inerts and Other	0.2%	1,290	0.0%	0	0.0%	0	0.0%	0	0.2%	1,290
Household Hazardous Waste	**0.3%**	**1,504**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.2%**	**1,504**
Paint	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	119	0.0%	0	0.0%	0	0.0%	0	0.0%	119
Remainder/Composite Household Hazardous	0.2%	1,385	0.0%	0	0.0%	0	0.0%	0	0.2%	1,385
Special Waste	**0.7%**	**4,254**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**78**	**0.5%**	**4,333**
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	0.7%	4,238	0.0%	0	0.0%	0	0.0%	78	0.5%	4,316
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	17	0.0%	0	0.0%	0	0.0%	0	0.0%	17
Mixed Residue	**0.0%**	**229**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**229**
Totals	**100.0%**	**582,486**	**100.0%**	**21,768**	**100.0%**	**5,392**	**100.0%**	**234,486**	**100.0%**	**844,131**
Streams Sampled	53		17		4		43		**117**	
TPEPY	1.28		0.05		0.01		0.51		**1.85**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Manufacturing – All Other

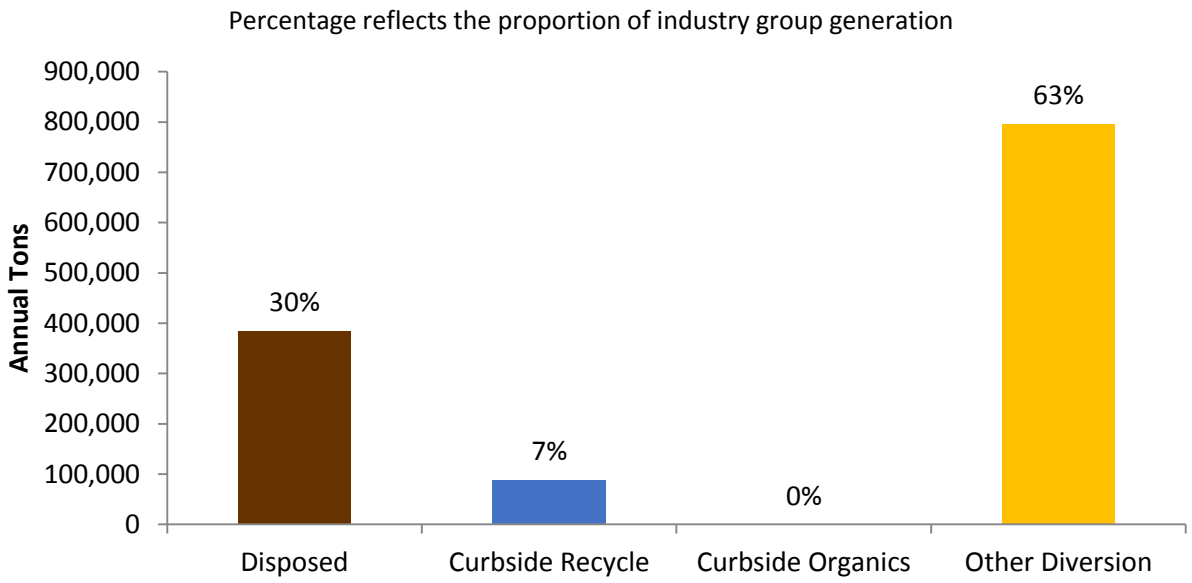
Table 48 presents key findings for the Manufacturing – All Other industry group (Group 7). Statewide, Group 7 disposed of more than 384,000 tons and diverted nearly 886,000 tons, mostly through the Other Diversion stream. Total generation was approximately 1.50 TPEPY. *Remainder/composite paper – compostable* was the most prevalent divertible material type in the Group 7 Disposed stream, accounting for 9 percent of disposal. Approximately 66 percent of the Group 7 Other Diversion stream was *other ferrous* and *other non-ferrous*.

Table 48. Key Findings and Metrics: Manufacturing – All Other

Manufacturing - All Other				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.45	1.05	384,292	885,586	70%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (8%, 29,777 tons) • Food (7%, 26,907 tons) • Clean Pallets & Crates (6%, 21,632 tons)				

As shown in Figure 29, the Other Diversion stream accounted for approximately 63 percent of total generation in Group 7. The majority of the remaining generation (30 percent) is the Disposed stream. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins.

Figure 29. Annual Tons by Waste Stream: Manufacturing – All Other



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 30 breaks down the potential recoverability (by recoverability group) for each stream in Group 7. As shown, the Other Diversion stream was primarily **Other Recyclable** materials.

The Group 7 Curbside Recycle contamination rate was 23 percent, largely from lumber found in recycling bins. The study did not include any sites from this group with Curbside Organics.

Figure 30. Recoverability by Stream: Manufacturing – All Other

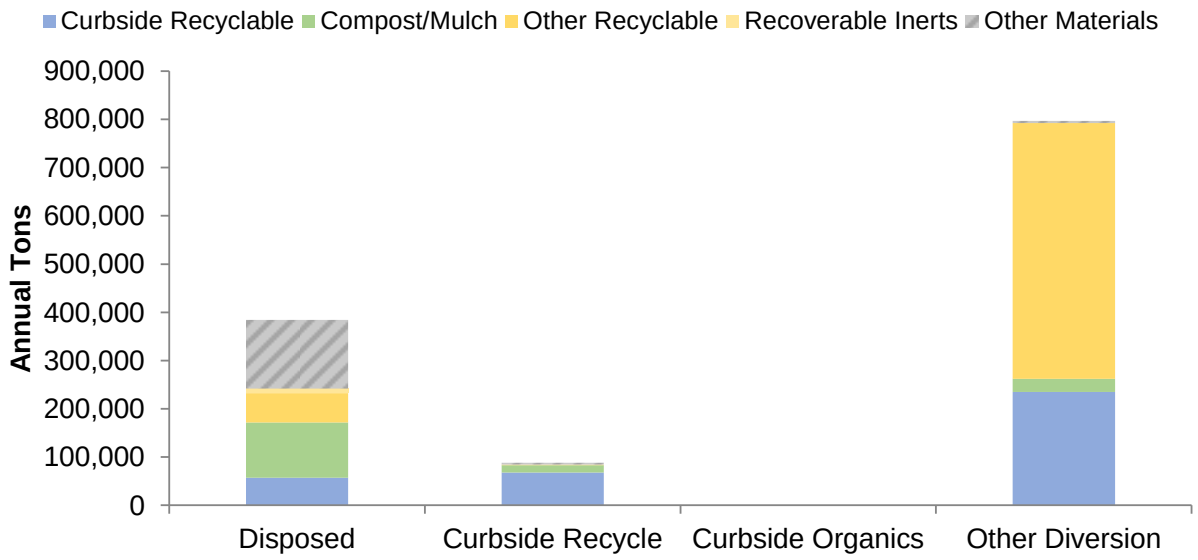


Figure 31 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 31 illustrates, approximately 47 percent of total generation in Group 7 was material in the **Other Recyclable** recoverability group, and approximately 28 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 88 percent of the Group 7 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 31. Recoverability of Materials Generated in the Manufacturing – All Other Sector

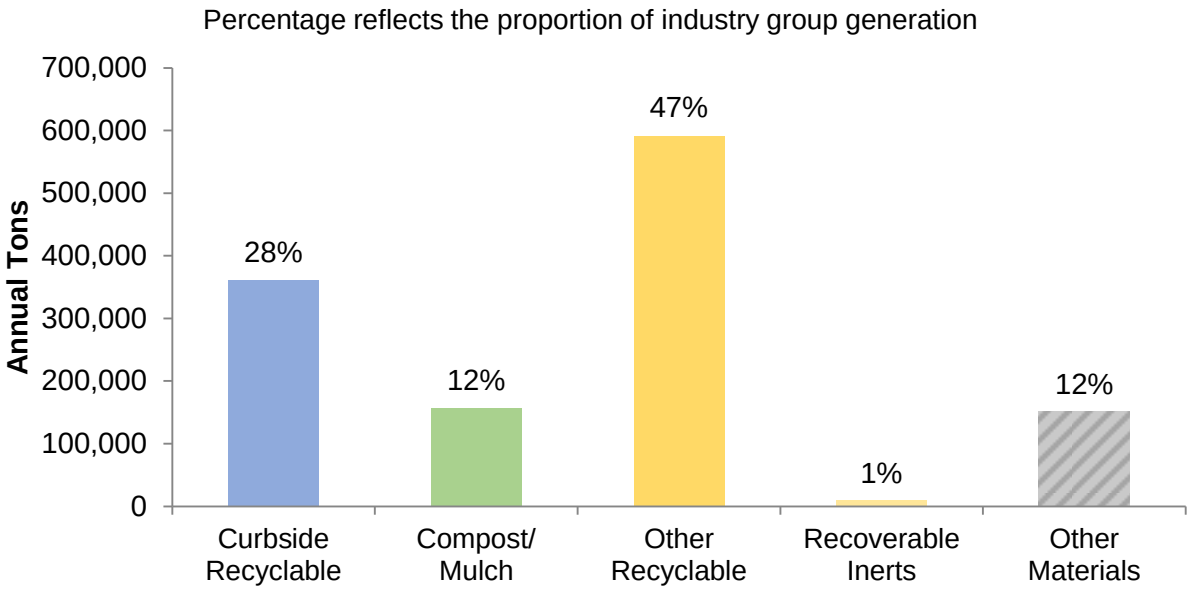


Table 49 presents detailed composition results for each stream in Group 7, as well as for the total group generation.

Table 49. Composition Summary: Manufacturing – All Other

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**25.1%**	**96,612**	**81.9%**	**72,799**	**-**	**-**	**29.4%**	**234,258**	**31.8%**	**403,669**
Uncoated Corrugated Cardboard	4.4%	16,996	28.4%	25,254	-	-	5.2%	41,146	6.6%	83,396
Paper Bags	0.3%	989	0.7%	612	-	-	0.0%	0	0.1%	1,601
Newspaper	0.6%	2,387	0.7%	666	-	-	0.0%	0	0.2%	3,053
White Ledger Paper	2.7%	10,472	3.5%	3,086	-	-	3.3%	26,503	3.2%	40,061
Other Office Paper	1.9%	7,363	30.8%	27,354	-	-	0.1%	454	2.8%	35,172
Magazines and Catalogs	0.6%	2,185	11.2%	9,969	-	-	0.0%	0	1.0%	12,153
Phone Books and Directories	0.1%	470	0.0%	0	-	-	0.0%	0	0.0%	470
Other Miscellaneous Paper - Compostable	0.6%	2,229	5.4%	4,803	-	-	0.0%	0	0.6%	7,032
Other Miscellaneous Paper - Other	2.8%	10,913	0.6%	517	-	-	20.8%	165,973	14.0%	177,403
Remainder/Composite Paper - Compostable	7.7%	29,777	0.1%	52	-	-	0.0%	0	2.3%	29,828
Remainder/Composite Paper - Other	3.3%	12,832	0.5%	485	-	-	0.0%	182	1.1%	13,499
Glass	**0.6%**	**2,168**	**0.1%**	**102**	**-**	**-**	**0.1%**	**490**	**0.2%**	**2,759**
Clear Glass Bottles and Containers	0.1%	511	0.0%	32	-	-	0.0%	343	0.1%	886
Green Glass Bottles and Containers	0.0%	113	0.1%	70	-	-	0.0%	0	0.0%	183
Brown Glass Bottles and Containers	0.1%	288	0.0%	0	-	-	0.0%	147	0.0%	435
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Flat Glass	0.3%	1,144	0.0%	0	-	-	0.0%	0	0.1%	1,144
Remainder/Composite Glass	0.0%	111	0.0%	0	-	-	0.0%	0	0.0%	111
Metal	**8.5%**	**32,592**	**0.4%**	**386**	**-**	**-**	**66.2%**	**527,081**	**44.1%**	**560,059**
Tin/Steel Cans	0.3%	1,091	0.0%	0	-	-	0.0%	6	0.1%	1,097
Major Appliances	0.5%	1,907	0.0%	0	-	-	0.0%	0	0.2%	1,907
Used Oil Filters	0.0%	54	0.0%	0	-	-	0.0%	0	0.0%	54
Other Ferrous	4.7%	18,172	0.4%	364	-	-	44.1%	351,011	29.1%	369,547
Aluminum Cans	0.1%	539	0.0%	15	-	-	0.0%	210	0.1%	764
Other Non-Ferrous	2.2%	8,358	0.0%	7	-	-	22.1%	175,854	14.5%	184,219
Remainder/Composite Metal	0.6%	2,473	0.0%	0	-	-	0.0%	0	0.2%	2,473
Electronics	**0.6%**	**2,283**	**0.0%**	**0**	**-**	**-**	**0.4%**	**3,256**	**0.4%**	**5,539**
Brown Goods	0.2%	835	0.0%	0	-	-	0.0%	0	0.1%	835
Computer-related Electronics	0.0%	0	0.0%	0	-	-	0.3%	2,352	0.2%	2,352
Other Small Consumer Electronics	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Video Display Devices	0.4%	1,448	0.0%	0	-	-	0.1%	904	0.2%	2,352
Plastic	**13.6%**	**52,142**	**4.9%**	**4,383**	**-**	**-**	**0.6%**	**4,774**	**4.8%**	**61,299**
PETE Plastic Containers	0.3%	1,183	0.2%	190	-	-	0.1%	588	0.2%	1,962
HDPE Plastic Containers	0.3%	1,166	0.2%	155	-	-	0.0%	23	0.1%	1,344
Miscellaneous Plastic Containers	0.2%	720	0.5%	403	-	-	0.0%	0	0.1%	1,123
Plastic Trash Bags	1.2%	4,705	0.0%	0	-	-	0.0%	0	0.4%	4,705
Plastic Grocery and Other Merchandise Bags	0.1%	542	0.0%	18	-	-	0.0%	0	0.0%	560
Non-Bag Commercial and Industrial Packaging Film	1.9%	7,167	0.7%	592	-	-	0.0%	0	0.6%	7,759
Film Products	0.0%	168	0.0%	1	-	-	0.0%	90	0.0%	259
Other Film - Other	1.6%	6,173	1.5%	1,335	-	-	0.0%	0	0.6%	7,508
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	633	0.2%	165	-	-	0.0%	10	0.1%	808
Durable Plastic Items - Other	1.0%	3,905	1.6%	1,395	-	-	0.1%	466	0.5%	5,766
Remainder/Composite Plastic	6.7%	25,780	0.1%	128	-	-	0.5%	3,596	2.3%	29,505
Other Organic	**20.3%**	**78,076**	**0.6%**	**497**	**-**	**-**	**0.0%**	**0**	**6.2%**	**78,573**
Food	7.0%	26,907	0.1%	73	-	-	0.0%	0	2.1%	26,980
Leaves and Grass	0.8%	3,185	0.5%	411	-	-	0.0%	0	0.3%	3,596
Prunings and Trimmings	0.7%	2,541	0.0%	0	-	-	0.0%	0	0.2%	2,541
Branches and Stumps	1.5%	5,840	0.0%	0	-	-	0.0%	0	0.5%	5,840
Manures	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Textiles	4.4%	17,024	0.0%	14	-	-	0.0%	0	1.3%	17,038
Carpet	0.4%	1,433	0.0%	0	-	-	0.0%	0	0.1%	1,433
Remainder/Composite Organic	5.5%	21,146	0.0%	0	-	-	0.0%	0	1.7%	21,146
Inerts and Other	**28.3%**	**108,633**	**11.2%**	**9,994**	**-**	**-**	**3.4%**	**26,859**	**11.5%**	**145,487**
Concrete	0.4%	1,726	0.0%	0	-	-	0.0%	0	0.1%	1,726
Asphalt Paving	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	2	0.0%	0	-	-	0.0%	0	0.0%	2
Clean Dimensional Lumber	4.9%	18,804	11.2%	9,994	-	-	0.0%	0	2.3%	28,798
Clean Engineered Wood	0.9%	3,444	0.0%	0	-	-	0.0%	0	0.3%	3,444
Clean Pallets & Crates	5.6%	21,632	0.0%	0	-	-	3.4%	26,859	3.8%	48,491
Other Wood Waste	8.2%	31,430	0.0%	0	-	-	0.0%	0	2.5%	31,430
Gypsum Board	1.4%	5,215	0.0%	0	-	-	0.0%	0	0.4%	5,215
Rock, Soil and Fines	0.7%	2,568	0.0%	0	-	-	0.0%	0	0.2%	2,568
Remainder/Composite Inerts and Other	6.2%	23,810	0.0%	0	-	-	0.0%	0	1.9%	23,810
Household Hazardous Waste	**0.9%**	**3,476**	**0.0%**	**11**	**-**	**-**	**0.0%**	**1**	**0.3%**	**3,488**
Paint	0.8%	2,930	0.0%	0	-	-	0.0%	0	0.2%	2,930
Vehicle and Equipment Fluids	0.0%	83	0.0%	0	-	-	0.0%	0	0.0%	83
Used Oil	0.0%	7	0.0%	0	-	-	0.0%	0	0.0%	7
Batteries	0.0%	53	0.0%	11	-	-	0.0%	1	0.0%	65
Remainder/Composite Household Hazardous	0.1%	403	0.0%	0	-	-	0.0%	0	0.0%	403
Special Waste	**2.2%**	**8,310**	**0.0%**	**0**	**-**	**-**	**0.0%**	**0**	**0.7%**	**8,310**
Ash	0.0%	86	0.0%	0	-	-	0.0%	0	0.0%	86
Treated Medical Waste	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Bulky Items	1.9%	7,269	0.0%	0	-	-	0.0%	0	0.6%	7,269
Tires	0.2%	956	0.0%	0	-	-	0.0%	0	0.1%	956
Remainder/Composite Special Waste	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Mixed Residue	**0.0%**	**0**	**0.8%**	**695**	**-**	**-**	**0.0%**	**0**	**0.1%**	**695**
Totals	**100.0%**	**384,292**	**100.0%**	**88,868**	**-**	**-**	**100.0%**	**796,718**	**100.0%**	**1,269,878**
Streams Sampled	53		17		0		74		**144**	
TPEPY	0.45		0.10		0.00		0.94		**1.50**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Medical & Health

Table 50 presents key findings for the Medical & Health industry group (Group 8). Statewide, Group 8 disposed of more than 1 million tons annually and had a 9 percent diversion rate, the lowest diversion rate of any industry group. This was likely due to a combination of the types of materials generated (such as patient gowns, tubing, and gloves) that could not be recovered and privacy policies that reduced the recovery of paper. *Food* was the most prevalent divertible material type in the Group 8 Disposed stream, accounting for 22 percent of disposal.

Table 50. Key Findings and Metrics: Medical & Health

Medical & Health				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.67	0.06	1,003,316	93,629	9%
Top Three Diversion Opportunities in Disposed Stream				
• Food (22%, 216,983 tons) • Remainder/Composite Paper - Compostable (11%, 109,841 tons) • Leaves and Grass (3%, 26,201 tons)				

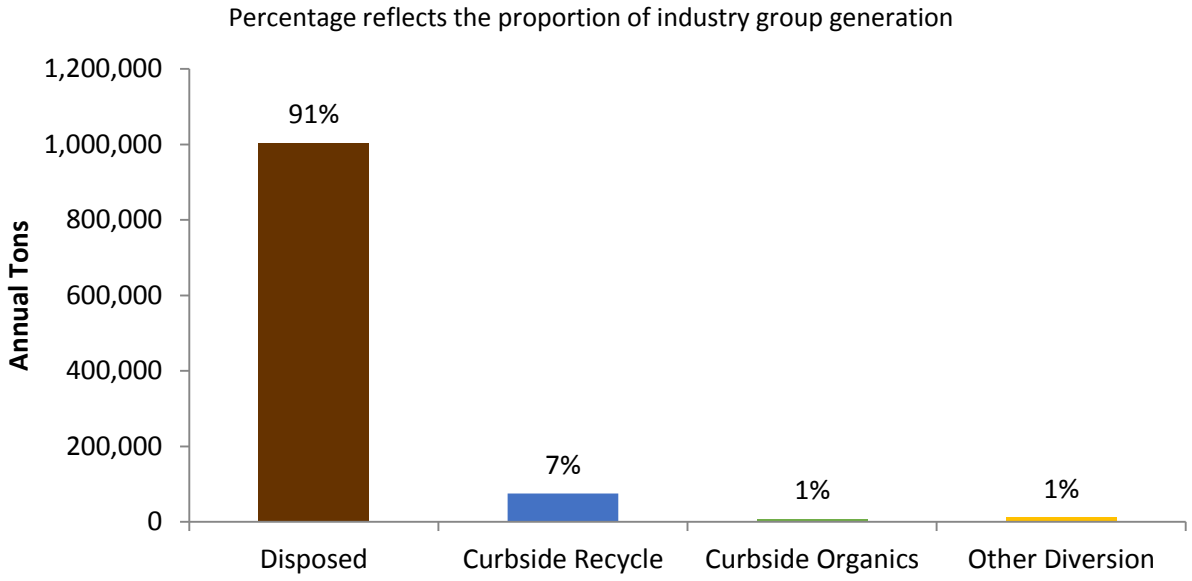
For sampling, this group was divided into two subgroups: “Ambulatory Health Care Services” and “Hospital, Nursing, and Residential Care Facilities.” In addition to normalizing generation on a per employee basis (TPEPY) for the group as a whole, the project team normalized generation for the latter subgroup by the number of beds at each generator site. As shown in Table 51, Hospital, Nursing, and Residential Care Facilities in Group 8 generated an estimated 0.57 tons per bed per year. The number of sites used in this calculation is noted in Table 98 in Appendix C: Description of Calculations.

Table 51. Generation Rate Summary by Weight: Medical & Health (tons per bed per year)

Tons per Bed per Year	**Disposed**	**Curbside Recycle**	**Curbside Organics**	**Other Diversion**	**Generation**
Hospital, Nursing, & Residential Care Facilities	0.52	0.03	0.01	0.01	**0.57**

Figure 32 presents the annual tons for each stream in Group 8. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately 91 percent of Group 8 generation went to the Disposed stream.

Figure 32. Annual Tons by Waste Stream: Medical & Health



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 33 breaks down the potential recoverability (by recoverability group) for each stream in Group 8. As shown, **Compost/Mulch** and **Other Materials** each accounted for approximately 40 percent of the Disposed stream.

The Group 8 Curbside Recycle contamination rate was 7 percent, and the Curbside Organics contamination rate was 21 percent.

Figure 33. Recoverability by Stream: Medical & Health

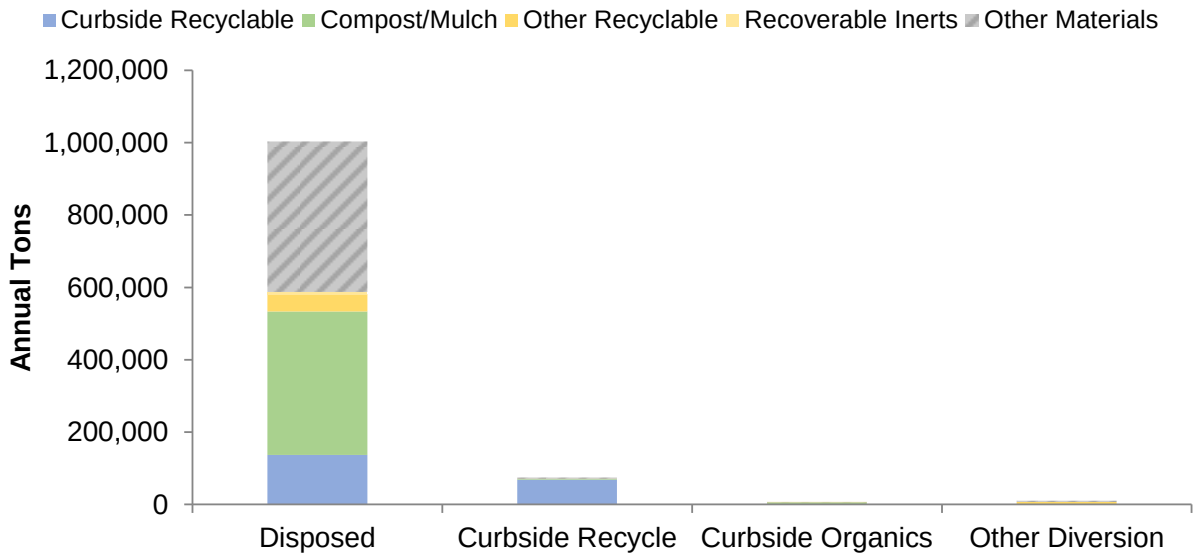


Figure 34 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 34 illustrates, approximately 39 percent of total generation in Group 8 went to the **Other Materials** recoverability group. This is the only industry group in which **Other Materials** is the largest recoverability group, mainly due to a large amount of *Remainder/Composite Organic* materials, including diapers and other organic waste not typically recovered, that was generated. When combined, divertible materials accounted for roughly 61 percent of the Group 8 generation, the lowest diversion potential of any industry group. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 34. Recoverability of Materials Generated in the Medical & Health Sector

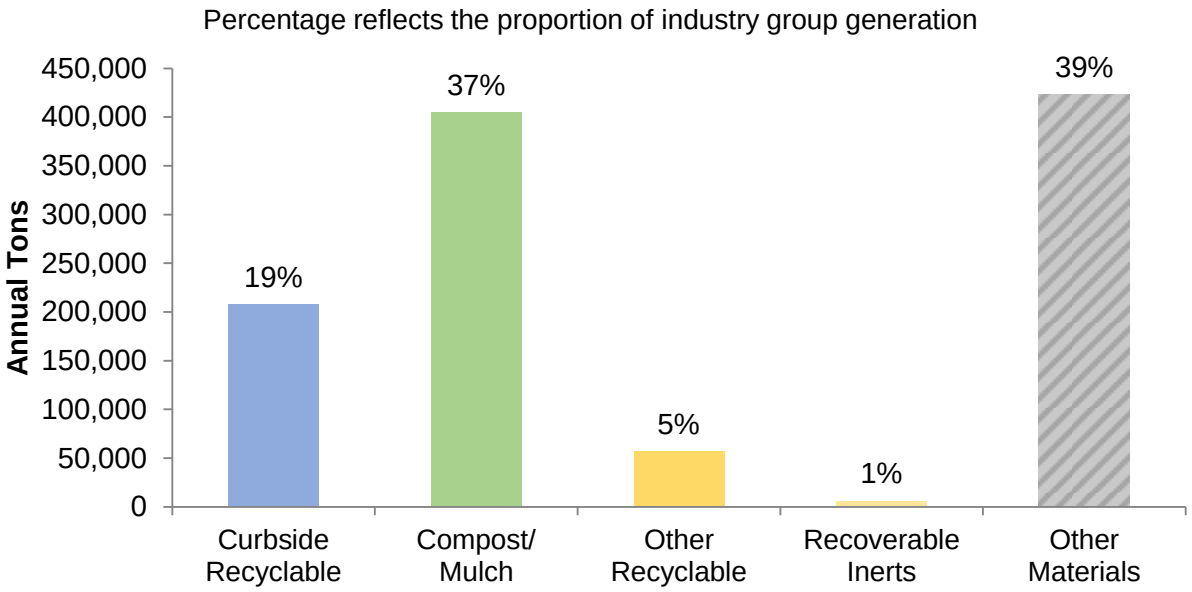


Table 52 presents detailed composition results for each stream in Group 8, as well as for the total group generation.

Table 52. Composition Summary: Medical & Health

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**25.9%**	**259,993**	**90.0%**	**67,359**	**10.4%**	**822**	**0.4%**	**43**	**29.9%**	**328,218**
Uncoated Corrugated Cardboard	1.9%	18,676	60.3%	45,116	0.2%	16	0.4%	38	5.8%	63,847
Paper Bags	0.2%	1,801	0.6%	474	0.0%	0	0.0%	1	0.2%	2,276
Newspaper	2.5%	24,923	6.2%	4,670	0.0%	0	0.0%	0	2.7%	29,593
White Ledger Paper	1.4%	14,281	5.1%	3,822	0.1%	5	0.0%	1	1.7%	18,109
Other Office Paper	1.9%	19,249	7.1%	5,319	0.0%	0	0.0%	0	2.2%	24,568
Magazines and Catalogs	0.6%	5,632	5.4%	4,068	0.0%	0	0.0%	1	0.9%	9,701
Phone Books and Directories	0.2%	1,916	0.0%	14	0.0%	0	0.0%	0	0.2%	1,930
Other Miscellaneous Paper - Compostable	0.1%	1,192	1.0%	738	3.4%	269	0.0%	0	0.2%	2,198
Other Miscellaneous Paper - Other	2.6%	25,585	2.7%	2,046	2.4%	191	0.0%	2	2.5%	27,824
Remainder/Composite Paper - Compostable	10.9%	109,841	0.3%	219	0.0%	0	0.0%	0	10.0%	110,059
Remainder/Composite Paper - Other	3.7%	36,898	1.2%	873	4.3%	341	0.0%	0	3.5%	38,112
Glass	**0.5%**	**4,805**	**0.4%**	**264**	**0.0%**	**0**	**0.0%**	**0**	**0.5%**	**5,068**
Clear Glass Bottles and Containers	0.3%	2,512	0.2%	180	0.0%	0	0.0%	0	0.2%	2,692
Green Glass Bottles and Containers	0.0%	438	0.0%	0	0.0%	0	0.0%	0	0.0%	438
Brown Glass Bottles and Containers	0.0%	428	0.0%	0	0.0%	0	0.0%	0	0.0%	428
Other Glass Colored Bottles and Containers	0.0%	19	0.1%	62	0.0%	0	0.0%	0	0.0%	81
Flat Glass	0.0%	214	0.0%	0	0.0%	0	0.0%	0	0.0%	214
Remainder/Composite Glass	0.1%	1,193	0.0%	22	0.0%	0	0.0%	0	0.1%	1,215
Metal	**1.6%**	**15,997**	**2.1%**	**1,577**	**4.0%**	**317**	**0.1%**	**8**	**1.6%**	**17,900**
Tin/Steel Cans	0.7%	7,483	0.8%	616	3.7%	291	0.0%	3	0.8%	8,394
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Ferrous	0.2%	2,222	0.0%	1	0.0%	0	0.0%	0	0.2%	2,223
Aluminum Cans	0.2%	1,753	1.2%	913	0.0%	0	0.0%	5	0.2%	2,670
Other Non-Ferrous	0.2%	1,668	0.0%	0	0.3%	25	0.0%	0	0.2%	1,694
Remainder/Composite Metal	0.3%	2,872	0.1%	47	0.0%	0	0.0%	0	0.3%	2,918
Electronics	**0.2%**	**2,379**	**0.1%**	**80**	**0.0%**	**0**	**12.9%**	**1,400**	**0.4%**	**3,858**
Brown Goods	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Computer-related Electronics	0.2%	2,379	0.1%	80	0.0%	0	12.9%	1,400	0.4%	3,858
Other Small Consumer Electronics	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Plastic	**9.4%**	**94,240**	**5.4%**	**4,040**	**9.9%**	**781**	**0.0%**	**2**	**9.0%**	**99,063**
PETE Plastic Containers	0.3%	3,176	0.5%	403	0.1%	10	0.0%	1	0.3%	3,589
HDPE Plastic Containers	0.6%	5,698	1.9%	1,391	0.8%	62	0.0%	1	0.7%	7,152
Miscellaneous Plastic Containers	0.4%	3,799	0.4%	315	1.0%	81	0.0%	0	0.4%	4,195
Plastic Trash Bags	2.7%	27,308	0.4%	266	0.1%	10	0.0%	0	2.5%	27,583
Plastic Grocery and Other Merchandise Bags	0.2%	1,513	0.0%	23	0.0%	3	0.0%	0	0.1%	1,539
Non-Bag Commercial and Industrial Packaging Film	0.0%	482	0.2%	143	0.0%	0	0.0%	0	0.1%	625
Film Products	0.0%	46	0.1%	49	0.3%	25	0.0%	0	0.0%	120
Other Film - Other	1.9%	19,427	0.4%	330	2.8%	225	0.0%	0	1.8%	19,982
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	202	0.2%	113	0.0%	0	0.0%	0	0.0%	316
Durable Plastic Items - Other	0.4%	3,879	0.3%	252	0.0%	0	0.0%	0	0.4%	4,131
Remainder/Composite Plastic	2.9%	28,711	1.0%	755	4.6%	365	0.0%	1	2.7%	29,831
Other Organic	**54.6%**	**548,122**	**1.3%**	**943**	**75.7%**	**5,989**	**59.2%**	**6,422**	**51.2%**	**561,476**
Food	21.6%	216,983	1.2%	915	69.5%	5,498	0.2%	20	20.4%	223,416
Leaves and Grass	2.6%	26,201	0.0%	0	0.0%	0	0.0%	0	2.4%	26,201
Prunings and Trimmings	1.5%	15,048	0.0%	0	6.2%	491	0.1%	7	1.4%	15,546
Branches and Stumps	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Manures	1.1%	10,763	0.0%	0	0.0%	0	0.0%	0	1.0%	10,763
Textiles	2.3%	23,161	0.0%	20	0.0%	0	59.0%	6,394	2.7%	29,574
Carpet	1.7%	16,583	0.0%	0	0.0%	0	0.0%	0	1.5%	16,583
Remainder/Composite Organic	23.9%	239,384	0.0%	9	0.0%	0	0.0%	0	21.8%	239,392
Inerts and Other	**3.0%**	**29,736**	**0.1%**	**39**	**0.0%**	**0**	**0.0%**	**0**	**2.7%**	**29,775**
Concrete	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Dimensional Lumber	0.0%	2	0.0%	0	0.0%	0	0.0%	0	0.0%	2
Clean Engineered Wood	0.1%	798	0.0%	0	0.0%	0	0.0%	0	0.1%	798
Clean Pallets & Crates	1.6%	15,611	0.0%	0	0.0%	0	0.0%	0	1.4%	15,611
Other Wood Waste	0.8%	7,603	0.0%	0	0.0%	0	0.0%	0	0.7%	7,603
Gypsum Board	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Rock, Soil and Fines	0.6%	5,611	0.0%	0	0.0%	0	0.0%	0	0.5%	5,611
Remainder/Composite Inerts and Other	0.0%	111	0.1%	39	0.0%	0	0.0%	0	0.0%	150
Household Hazardous Waste	**0.1%**	**968**	**0.0%**	**11**	**0.0%**	**0**	**0.0%**	**0**	**0.1%**	**979**
Paint	0.0%	18	0.0%	0	0.0%	0	0.0%	0	0.0%	18
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	24	0.0%	0	0.0%	0	0.0%	0	0.0%	24
Remainder/Composite Household Hazardous	0.1%	925	0.0%	11	0.0%	0	0.0%	0	0.1%	937
Special Waste	**2.0%**	**19,589**	**0.5%**	**410**	**0.0%**	**0**	**27.4%**	**2,971**	**2.1%**	**22,970**
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.4%	3,963	0.0%	0	0.0%	0	0.0%	0	0.4%	3,963
Bulky Items	0.3%	2,782	0.0%	0	0.0%	0	27.4%	2,971	0.5%	5,753
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	1.3%	12,844	0.5%	410	0.0%	0	0.0%	0	1.2%	13,254
Mixed Residue	**2.7%**	**27,487**	**0.2%**	**151**	**0.0%**	**0**	**0.0%**	**0**	**2.5%**	**27,638**
Totals	**100.0%**	**1,003,316**	**100.0%**	**74,874**	**100.0%**	**7,909**	**100.0%**	**10,846**	**100.0%**	**1,096,945**
Streams Sampled	55		29		2		31		**117**	
TPEPY	0.67		0.05		0.01		0.01		**0.74**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Public Administration

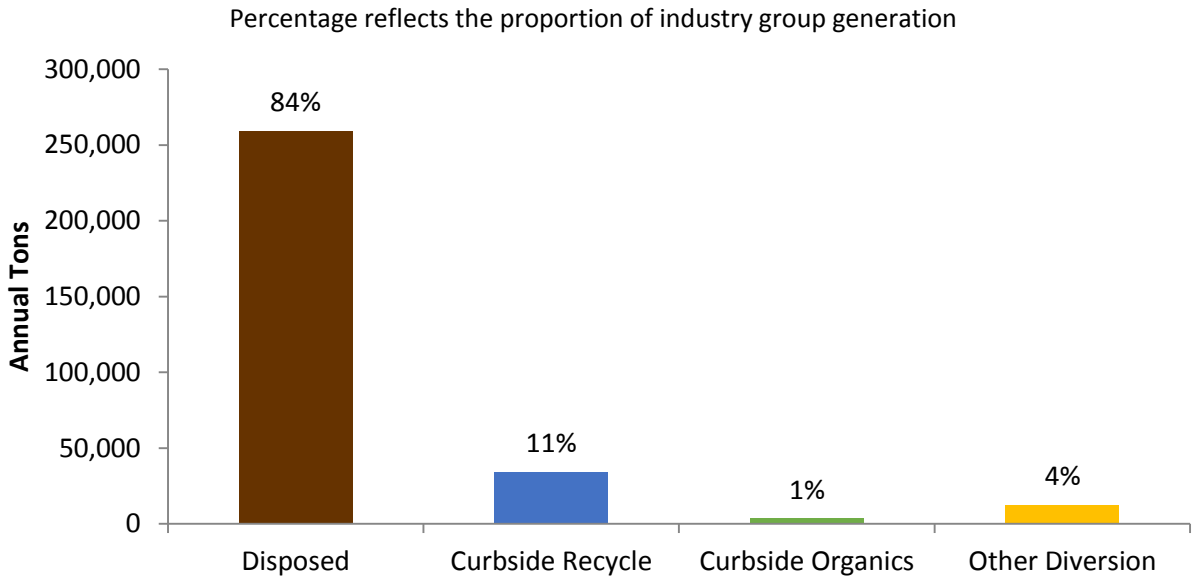
The Public Administration industry group's 0.39 TPEPY was the lowest total generation rate of all industry groups. Statewide, Group 9 disposed of more than 259,000 tons and diverted more than 50,000 tons. Group 9 disposed of nearly 45,000 tons of *food* in 2013, making it the most prevalent divertible material type in the Group 9 Disposed stream. Group 9 included all public sector sites such as local government buildings and police and fire stations, but it did not include schools (public or private). Table 53 presents key findings for Group 9.

Table 53. Key Findings and Metrics: Public Administration

Public Administration				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.32	0.06	259,137	50,354	16%
Top Three Diversion Opportunities in Disposed Stream				
• Food (17%, 44,508 tons) • Remainder/Composite Paper - Compostable (14%, 37,208 tons) • Clean Pallets & Crates (5%, 13,416 tons)				

The Disposed stream makes up 84 percent of total generation in Group 9, as illustrated in Figure 35. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins.

Figure 35. Annual Tons by Waste Stream: Public Administration



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 36 breaks down the potential recoverability (by recoverability group) for each stream in Group 9. As shown, approximately three-quarters of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 9 Curbside Recycle contamination rate was 7 percent, and the Curbside Organics contamination rate was 8 percent.

Figure 36. Recoverability by Stream: Public Administration

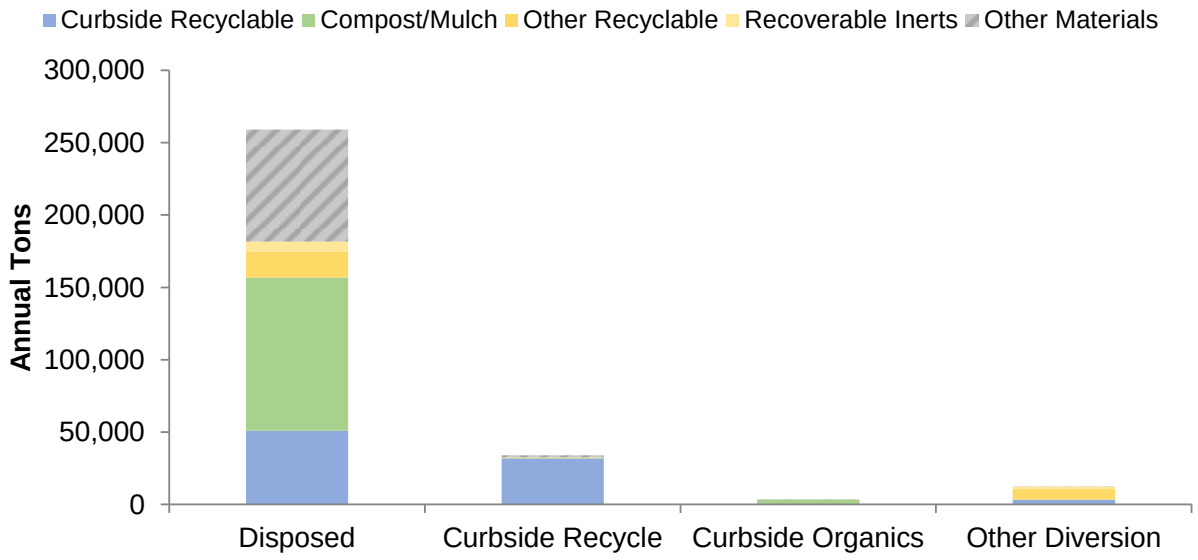


Figure 37 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 37 illustrates, approximately 36 percent of total generation in Group 9 was material in the **Compost/Mulch** recoverability group. **Curbside Recyclable** and **Other Materials** accounted for approximately 28 percent and 26 percent of Group 9 total generation, respectively. When combined, divertible materials accounted for nearly three-quarters of the Group 9 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 37. Recoverability of Materials Generated in the Public Administration Sector

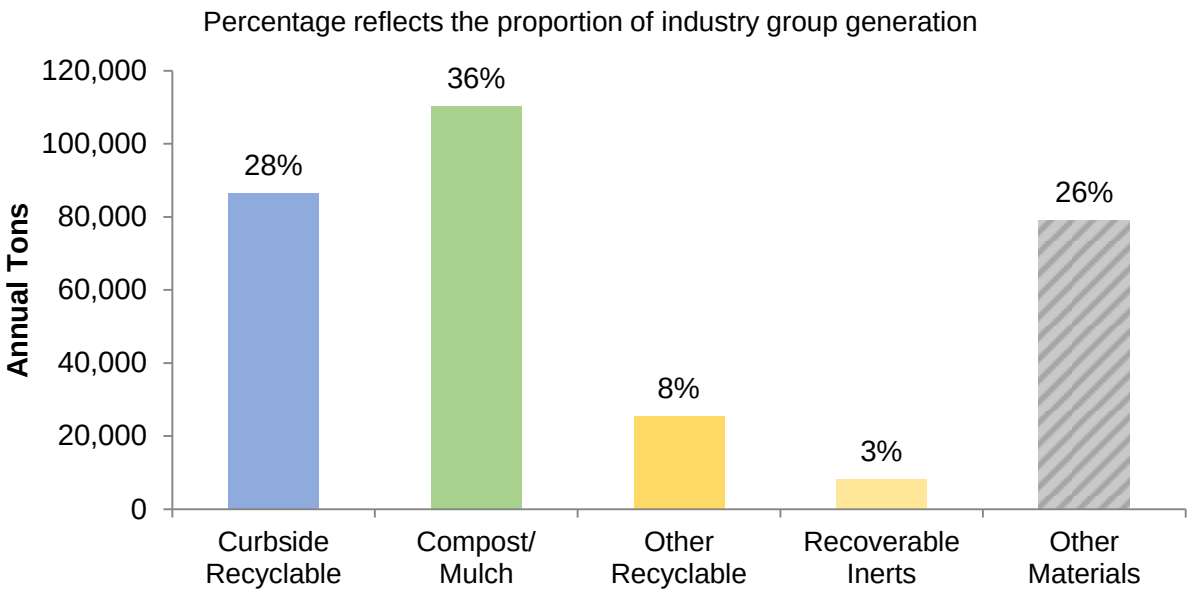


Table 54 presents detailed composition results for each stream in Group 9, as well as for the total group generation.

Table 54. Composition Summary: Public Administration

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**34.7%**	**90,050**	**88.8%**	**30,409**	**28.4%**	**1,053**	**27.2%**	**3,381**	**40.4%**	**124,892**
Uncoated Corrugated Cardboard	2.8%	7,172	20.1%	6,894	5.9%	220	0.0%	0	4.6%	14,286
Paper Bags	0.3%	871	0.3%	113	0.1%	6	0.0%	0	0.3%	990
Newspaper	2.3%	6,051	2.2%	757	0.0%	0	1.8%	227	2.3%	7,034
White Ledger Paper	3.4%	8,795	43.4%	14,846	0.0%	0	0.7%	81	7.7%	23,722
Other Office Paper	3.4%	8,938	11.0%	3,751	0.0%	0	23.4%	2,903	5.0%	15,591
Magazines and Catalogs	1.2%	3,037	6.2%	2,133	0.0%	0	0.7%	84	1.7%	5,254
Phone Books and Directories	0.1%	203	0.4%	146	0.0%	0	0.0%	0	0.1%	349
Other Miscellaneous Paper - Compostable	0.3%	771	0.2%	85	19.8%	733	0.6%	69	0.5%	1,657
Other Miscellaneous Paper - Other	3.4%	8,842	2.1%	728	0.6%	23	0.1%	18	3.1%	9,612
Remainder/Composite Paper - Compostable	14.4%	37,208	1.8%	599	1.7%	64	0.0%	0	12.2%	37,871
Remainder/Composite Paper - Other	3.1%	8,161	1.0%	359	0.2%	7	0.0%	0	2.8%	8,526
Glass	**0.9%**	**2,341**	**0.8%**	**272**	**0.0%**	**0**	**0.1%**	**15**	**0.8%**	**2,628**
Clear Glass Bottles and Containers	0.4%	958	0.8%	272	0.0%	0	0.1%	15	0.4%	1,245
Green Glass Bottles and Containers	0.0%	127	0.0%	0	0.0%	0	0.0%	0	0.0%	127
Brown Glass Bottles and Containers	0.1%	139	0.0%	0	0.0%	0	0.0%	0	0.0%	139
Other Glass Colored Bottles and Containers	0.0%	63	0.0%	0	0.0%	0	0.0%	0	0.0%	63
Flat Glass	0.0%	12	0.0%	0	0.0%	0	0.0%	0	0.0%	12
Remainder/Composite Glass	0.4%	1,042	0.0%	0	0.0%	0	0.0%	0	0.3%	1,042
Metal	**7.2%**	**18,682**	**1.4%**	**466**	**0.0%**	**0**	**55.2%**	**6,861**	**8.4%**	**26,010**
Tin/Steel Cans	0.6%	1,446	0.1%	41	0.0%	0	0.0%	1	0.5%	1,487
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	33	0.0%	0	0.0%	0	0.0%	0	0.0%	33
Other Ferrous	1.5%	3,893	0.2%	78	0.0%	0	52.2%	6,478	3.4%	10,449
Aluminum Cans	0.2%	496	0.2%	60	0.0%	0	0.2%	24	0.2%	581
Other Non-Ferrous	1.0%	2,565	0.0%	2	0.0%	0	2.9%	358	0.9%	2,926
Remainder/Composite Metal	4.0%	10,249	0.8%	285	0.0%	0	0.0%	0	3.4%	10,534
Electronics	**0.1%**	**351**	**0.3%**	**111**	**0.0%**	**0**	**2.7%**	**339**	**0.3%**	**801**
Brown Goods	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Computer-related Electronics	0.1%	339	0.3%	111	0.0%	0	2.7%	339	0.3%	789
Other Small Consumer Electronics	0.0%	13	0.0%	0	0.0%	0	0.0%	0	0.0%	13
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Plastic	**13.3%**	**34,392**	**7.5%**	**2,577**	**0.6%**	**23**	**0.9%**	**109**	**12.0%**	**37,101**
PETE Plastic Containers	0.5%	1,401	1.0%	357	0.0%	0	0.6%	74	0.6%	1,832
HDPE Plastic Containers	0.4%	1,050	4.9%	1,664	0.0%	0	0.0%	0	0.9%	2,714
Miscellaneous Plastic Containers	0.5%	1,384	0.1%	32	0.0%	0	0.0%	1	0.5%	1,418
Plastic Trash Bags	2.8%	7,204	0.4%	140	0.2%	7	0.0%	0	2.4%	7,351
Plastic Grocery and Other Merchandise Bags	0.2%	603	0.0%	12	0.0%	0	0.0%	3	0.2%	618
Non-Bag Commercial and Industrial Packaging Film	0.2%	607	0.0%	11	0.0%	0	0.0%	0	0.2%	617
Film Products	0.0%	2	0.1%	26	0.0%	0	0.0%	5	0.0%	33
Other Film - Other	1.5%	4,016	0.2%	63	0.0%	0	0.1%	9	1.3%	4,088
Durable Plastic Items - #2 and #5 Bulky Rigids	0.5%	1,365	0.0%	11	0.0%	0	0.0%	0	0.4%	1,376
Durable Plastic Items - Other	1.9%	4,928	0.0%	12	0.0%	0	0.0%	0	1.6%	4,939
Remainder/Composite Plastic	4.6%	11,832	0.7%	250	0.4%	16	0.1%	17	3.9%	12,115
Other Organic	**28.0%**	**72,599**	**0.1%**	**28**	**71.0%**	**2,634**	**1.4%**	**174**	**24.4%**	**75,435**
Food	17.2%	44,508	0.1%	27	23.9%	886	0.3%	40	14.7%	45,461
Leaves and Grass	2.4%	6,191	0.0%	0	47.0%	1,743	0.0%	0	2.6%	7,934
Prunings and Trimmings	0.1%	263	0.0%	0	0.1%	5	1.1%	134	0.1%	403
Branches and Stumps	0.0%	125	0.0%	0	0.0%	0	0.0%	0	0.0%	125
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	2.5%	6,494	0.0%	0	0.0%	0	0.0%	0	2.1%	6,494
Carpet	0.7%	1,888	0.0%	0	0.0%	0	0.0%	0	0.6%	1,888
Remainder/Composite Organic	5.1%	13,130	0.0%	0	0.0%	0	0.0%	0	4.2%	13,130
Inerts and Other	**14.0%**	**36,234**	**0.0%**	**0**	**0.0%**	**0**	**11.2%**	**1,385**	**12.2%**	**37,619**
Concrete	1.6%	4,193	0.0%	0	0.0%	0	3.2%	399	1.5%	4,592
Asphalt Paving	0.4%	949	0.0%	0	0.0%	0	0.0%	0	0.3%	949
Asphalt Roofing	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Dimensional Lumber	0.7%	1,822	0.0%	0	0.0%	0	0.0%	0	0.6%	1,822
Clean Engineered Wood	0.6%	1,561	0.0%	0	0.0%	0	0.0%	0	0.5%	1,561
Clean Pallets & Crates	5.2%	13,416	0.0%	0	0.0%	0	0.0%	0	4.3%	13,416
Other Wood Waste	2.2%	5,775	0.0%	0	0.0%	0	0.0%	0	1.9%	5,775
Gypsum Board	0.2%	476	0.0%	0	0.0%	0	0.0%	0	0.2%	476
Rock, Soil and Fines	0.5%	1,323	0.0%	0	0.0%	0	7.9%	985	0.7%	2,308
Remainder/Composite Inerts and Other	2.6%	6,719	0.0%	0	0.0%	0	0.0%	0	2.2%	6,719
Household Hazardous Waste	**0.1%**	**359**	**0.0%**	**8**	**0.0%**	**0**	**1.2%**	**155**	**0.2%**	**521**
Paint	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	48	0.0%	0	0.0%	0	1.2%	155	0.1%	203
Remainder/Composite Household Hazardous	0.1%	311	0.0%	8	0.0%	0	0.0%	0	0.1%	318
Special Waste	**0.0%**	**83**	**1.0%**	**347**	**0.0%**	**0**	**0.0%**	**0**	**0.1%**	**430**
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	0	1.0%	347	0.0%	0	0.0%	0	0.1%	347
Bulky Items	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	83	0.0%	0	0.0%	0	0.0%	0	0.0%	83
Mixed Residue	**1.6%**	**4,046**	**0.0%**	**9**	**0.0%**	**0**	**0.0%**	**0**	**1.3%**	**4,055**
Totals	**100.0%**	**259,137**	**100.0%**	**34,225**	**100.0%**	**3,710**	**100.0%**	**12,419**	**100.0%**	**309,491**
Streams Sampled	51		28		5		33		**117**	
TPEPY	0.32		0.04		0.00		0.02		**0.39**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Restaurants

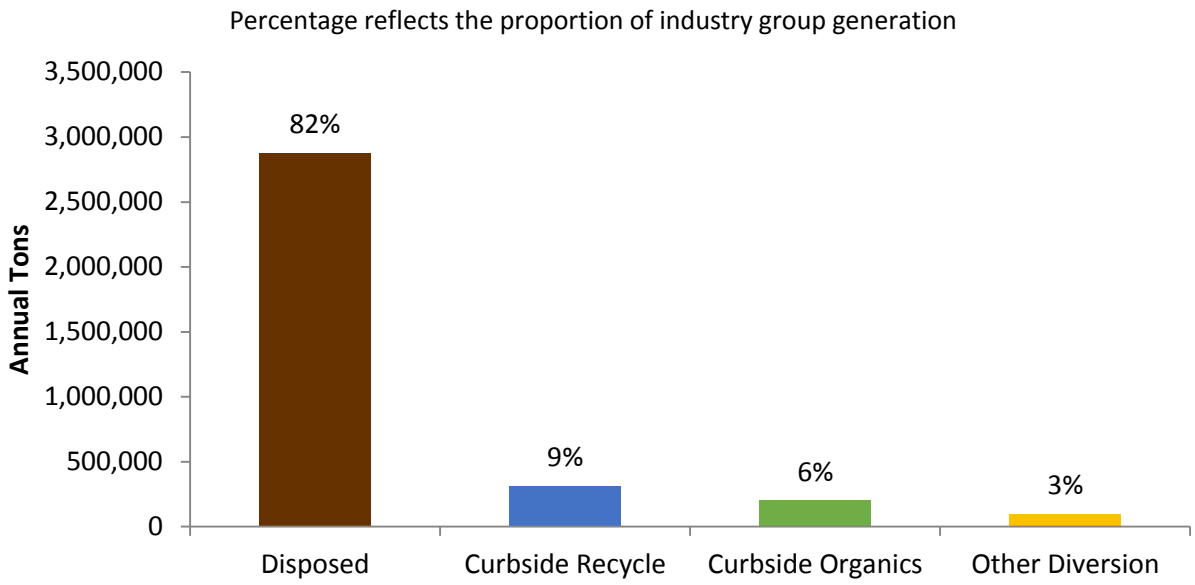
Table 55 presents key findings for the Restaurants industry group (Group 10). Statewide, Group 10 disposed of nearly 2.9 million tons and diverted nearly 618,000 tons. The total generation rate was approximately 2.92 TPEPY. *Food* is the most prevalent divertible material type in the Group 10 Disposed stream, accounting for 51 percent of disposal.

Table 55. Key Findings and Metrics: Restaurants

Restaurants				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
2.40	0.52	2,876,653	617,826	18%
Top Three Diversion Opportunities in Disposed Stream				
• Food (51%, 1,461,319 tons) • Remainder/Composite Paper - Compostable (12%, 350,240 tons) • Newspaper (3%, 76,093 tons)				

Figure 38 presents the annual tons for each stream in Group 10. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately 82 percent of total generation at Group 10 businesses went to the Disposed stream.

Figure 38. Annual Tons by Waste Stream: Restaurants



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 39 breaks down the potential recoverability (by recoverability group) for each stream in Group 10. As shown, more than 80 percent of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 10 Curbside Recycle contamination rate was 15 percent, and the Curbside Organics contamination rate was 10 percent.

Figure 39. Recoverability by Stream: Restaurants

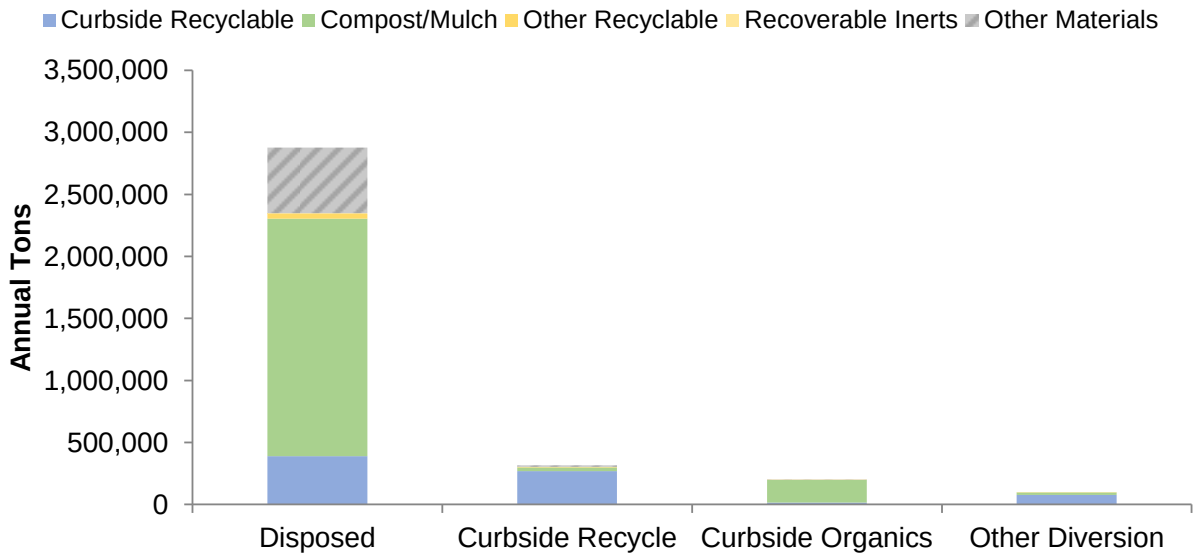


Figure 40 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 40 illustrates, approximately 61 percent of total generation in Group 10 was material in the **Compost/Mulch** recoverability group, and approximately 22 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 84 percent of the Group 10 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 40. Recoverability of Materials Generated in the Restaurants Sector

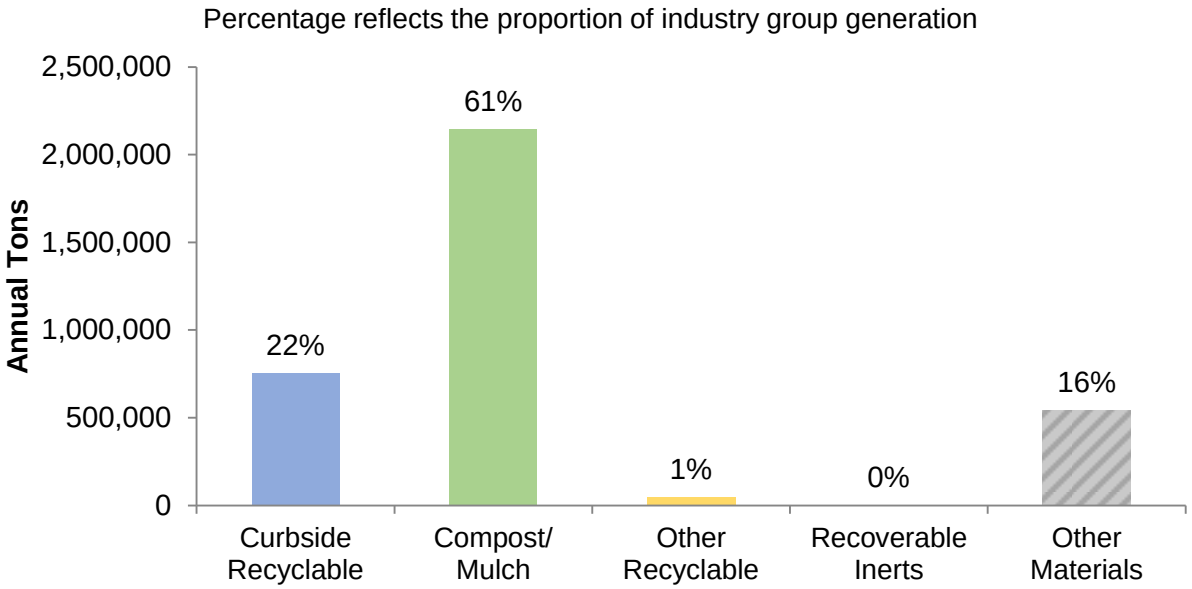


Table 56 presents detailed composition results for each stream in Group 10, as well as for the total group generation.

Table 56. Composition Summary: Restaurants

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**25.9%**	**746,481**	**68.1%**	**215,250**	**2.9%**	**5,852**	**20.4%**	**20,228**	**28.3%**	**987,811**
Uncoated Corrugated Cardboard	2.0%	56,636	61.3%	193,718	1.0%	2,074	19.5%	19,353	7.8%	271,780
Paper Bags	0.3%	8,983	0.3%	1,006	0.0%	0	0.0%	0	0.3%	9,989
Newspaper	2.6%	76,093	0.3%	884	0.4%	750	0.4%	410	2.2%	78,136
White Ledger Paper	0.7%	19,631	0.4%	1,145	0.0%	0	0.1%	101	0.6%	20,877
Other Office Paper	0.3%	9,087	0.6%	1,872	0.0%	0	0.0%	0	0.3%	10,959
Magazines and Catalogs	0.2%	6,468	0.4%	1,183	0.0%	0	0.0%	0	0.2%	7,652
Phone Books and Directories	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Miscellaneous Paper - Compostable	0.6%	16,158	1.5%	4,834	0.9%	1,897	0.0%	0	0.7%	22,890
Other Miscellaneous Paper - Other	2.1%	59,722	1.8%	5,808	0.0%	0	0.4%	365	1.9%	65,895
Remainder/Composite Paper - Compostable	12.2%	350,240	0.9%	2,870	0.3%	568	0.0%	0	10.1%	353,679
Remainder/Composite Paper - Other	5.0%	143,463	0.6%	1,929	0.3%	563	0.0%	0	4.2%	145,954
Glass	**2.7%**	**79,059**	**12.0%**	**37,982**	**6.8%**	**13,866**	**54.6%**	**54,175**	**5.3%**	**185,082**
Clear Glass Bottles and Containers	1.6%	45,721	5.2%	16,328	2.5%	5,019	5.9%	5,875	2.1%	72,943
Green Glass Bottles and Containers	0.5%	14,312	5.4%	17,121	3.6%	7,325	13.4%	13,239	1.5%	51,997
Brown Glass Bottles and Containers	0.5%	13,681	1.3%	4,081	0.8%	1,522	35.4%	35,061	1.6%	54,345
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Flat Glass	0.0%	59	0.0%	0	0.0%	0	0.0%	0	0.0%	59
Remainder/Composite Glass	0.2%	5,286	0.1%	452	0.0%	0	0.0%	0	0.2%	5,738
Metal	**2.1%**	**61,208**	**2.8%**	**8,738**	**0.4%**	**717**	**4.0%**	**3,986**	**2.1%**	**74,648**
Tin/Steel Cans	1.1%	31,374	2.4%	7,616	0.2%	347	1.4%	1,418	1.2%	40,755
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Ferrous	0.4%	12,115	0.0%	0	0.0%	55	0.1%	77	0.4%	12,248
Aluminum Cans	0.1%	4,157	0.2%	748	0.0%	61	2.5%	2,491	0.2%	7,456
Other Non-Ferrous	0.2%	5,191	0.1%	260	0.1%	254	0.0%	0	0.2%	5,704
Remainder/Composite Metal	0.3%	8,371	0.0%	115	0.0%	0	0.0%	0	0.2%	8,485
Electronics	**0.0%**	**0**	**0.0%**	**134**	**0.0%**	**0**	**0.1%**	**66**	**0.0%**	**200**
Brown Goods	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Computer-related Electronics	0.0%	0	0.0%	0	0.0%	0	0.1%	66	0.0%	66
Other Small Consumer Electronics	0.0%	0	0.0%	134	0.0%	0	0.0%	0	0.0%	134
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Plastic	**12.2%**	**350,384**	**9.8%**	**30,907**	**1.2%**	**2,452**	**0.2%**	**165**	**11.0%**	**383,909**
PETE Plastic Containers	0.6%	17,174	2.6%	8,307	0.2%	436	0.1%	86	0.7%	26,004
HDPE Plastic Containers	0.6%	17,639	2.5%	7,965	0.0%	0	0.0%	27	0.7%	25,631
Miscellaneous Plastic Containers	0.4%	10,363	0.8%	2,497	0.1%	116	0.0%	0	0.4%	12,976
Plastic Trash Bags	3.3%	94,146	0.3%	1,040	0.1%	121	0.0%	0	2.7%	95,308
Plastic Grocery and Other Merchandise Bags	0.1%	3,587	0.0%	124	0.0%	0	0.0%	0	0.1%	3,711
Non-Bag Commercial and Industrial Packaging Film	0.0%	936	0.1%	349	0.1%	138	0.0%	0	0.0%	1,423
Film Products	0.0%	0	0.0%	92	0.0%	0	0.0%	0	0.0%	92
Other Film - Other	3.3%	94,003	1.4%	4,414	0.8%	1,636	0.0%	0	2.9%	100,053
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	929	1.4%	4,272	0.0%	0	0.1%	52	0.2%	5,253
Durable Plastic Items - Other	0.2%	6,590	0.0%	119	0.0%	0	0.0%	0	0.2%	6,709
Remainder/Composite Plastic	3.7%	105,016	0.5%	1,727	0.0%	6	0.0%	0	3.1%	106,749
Other Organic	**54.9%**	**1,580,144**	**7.2%**	**22,903**	**88.7%**	**179,540**	**20.7%**	**20,545**	**51.6%**	**1,803,133**
Food	50.8%	1,461,319	5.6%	17,706	73.2%	148,160	20.7%	20,545	47.2%	1,647,730
Leaves and Grass	1.8%	53,140	0.0%	0	15.3%	30,876	0.0%	0	2.4%	84,016
Prunings and Trimmings	0.4%	10,440	1.1%	3,512	0.0%	0	0.0%	0	0.4%	13,952
Branches and Stumps	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	0.7%	20,721	0.0%	0	0.2%	505	0.0%	0	0.6%	21,226
Carpet	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Organic	1.2%	34,524	0.5%	1,685	0.0%	0	0.0%	0	1.0%	36,209
Inerts and Other	**1.3%**	**36,294**	**0.1%**	**319**	**0.0%**	**0**	**0.0%**	**0**	**1.0%**	**36,612**
Concrete	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Dimensional Lumber	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Engineered Wood	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Pallets & Crates	0.8%	21,613	0.0%	0	0.0%	0	0.0%	0	0.6%	21,613
Other Wood Waste	0.4%	12,652	0.0%	0	0.0%	0	0.0%	0	0.4%	12,652
Gypsum Board	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Rock, Soil and Fines	0.0%	1,118	0.0%	0	0.0%	0	0.0%	0	0.0%	1,118
Remainder/Composite Inerts and Other	0.0%	912	0.1%	319	0.0%	0	0.0%	0	0.0%	1,230
Household Hazardous Waste	**0.0%**	**441**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**441**
Paint	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	59	0.0%	0	0.0%	0	0.0%	0	0.0%	59
Remainder/Composite Household Hazardous	0.0%	382	0.0%	0	0.0%	0	0.0%	0	0.0%	382
Special Waste	**0.6%**	**18,495**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.5%**	**18,495**
Ash	0.6%	18,495	0.0%	0	0.0%	0	0.0%	0	0.5%	18,495
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Mixed Residue	**0.1%**	**4,147**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.1%**	**4,147**
Totals	**100.0%**	**2,876,653**	**100.0%**	**316,231**	**100.0%**	**202,428**	**100.0%**	**99,167**	**100.0%**	**3,494,479**
Streams Sampled	51		21		6		18		**96**	
TPEPY	2.40		0.26		0.17		0.08		**2.92**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Retail Trade – Food & Beverage Stores

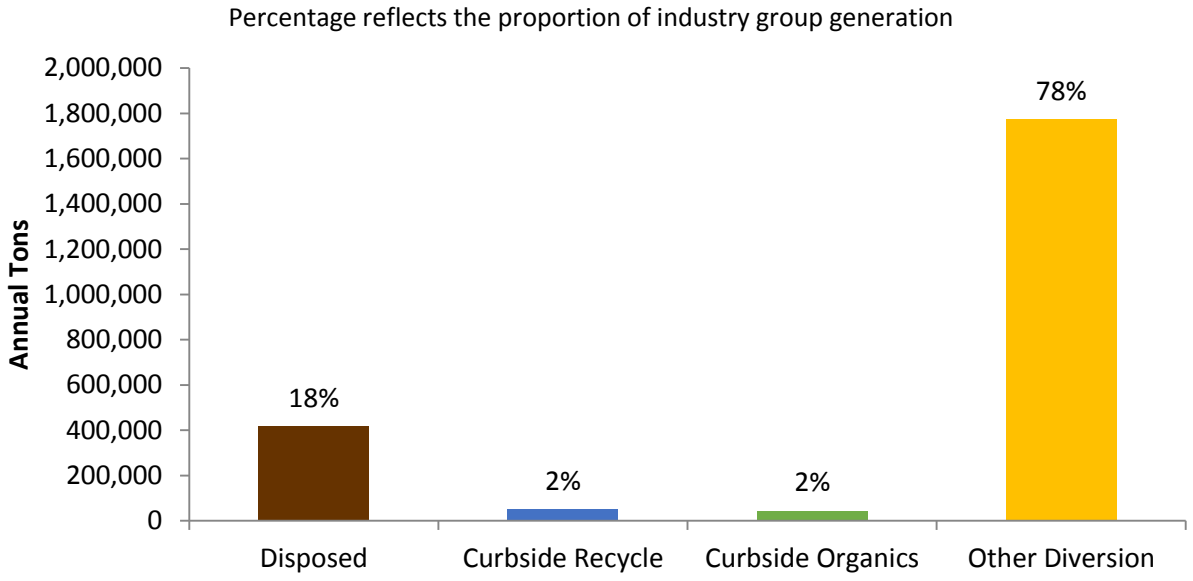
Table 57 presents key findings for the Retail Trade – Food & Beverage Stores industry group (Group 11). Statewide, Group 11 disposed of nearly 418,000 tons and diverted nearly 1.9 million tons, which worked out to an 82 percent diversion rate and 6.64 TPEPY. Group 11 had both the highest diversion rate and the highest generation rate among all industry groups. *Food* was the most prevalent divertible material type in the Group 11 Disposed stream, accounting for 42 percent of disposal. Among all the industry groups, Group 11 diverted the most material, by weight.

Table 57. Key Findings and Metrics: Retail Trade – Food & Beverage Stores

Retail Trade - Food & Beverage Stores				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.21	5.43	417,791	1,868,403	82%
Top Three Diversion Opportunities in Disposed Stream				
• Food (42%, 173,504 tons) • Remainder/Composite Paper - Compostable (9%, 37,501 tons) • Other Miscellaneous Paper - Other (3%, 13,492 tons)				

Figure 41 presents the annual tons for each stream in Group 11. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, more than three-quarters of total generation at Group 11 businesses went to the Other Diversion stream. Group 11 businesses reported back-hauling and selling directly to commodity markets large quantities of both *uncoated corrugated cardboard* and *food*. The high proportion of Other Diversion, and the high overall diversion and generation rates, are primarily due to these activities.

Figure 41. Annual Tons by Waste Stream: Retail Trade – Food & Beverage Stores



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 42 breaks down the potential recoverability (by recoverability group) for each stream in Group 11. As shown, approximately three-quarters of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 11 Curbside Recycle contamination rate was 24 percent, and the Curbside Organics contamination rate was 2 percent.

Figure 42. Recoverability by Stream: Retail Trade – Food & Beverage Stores

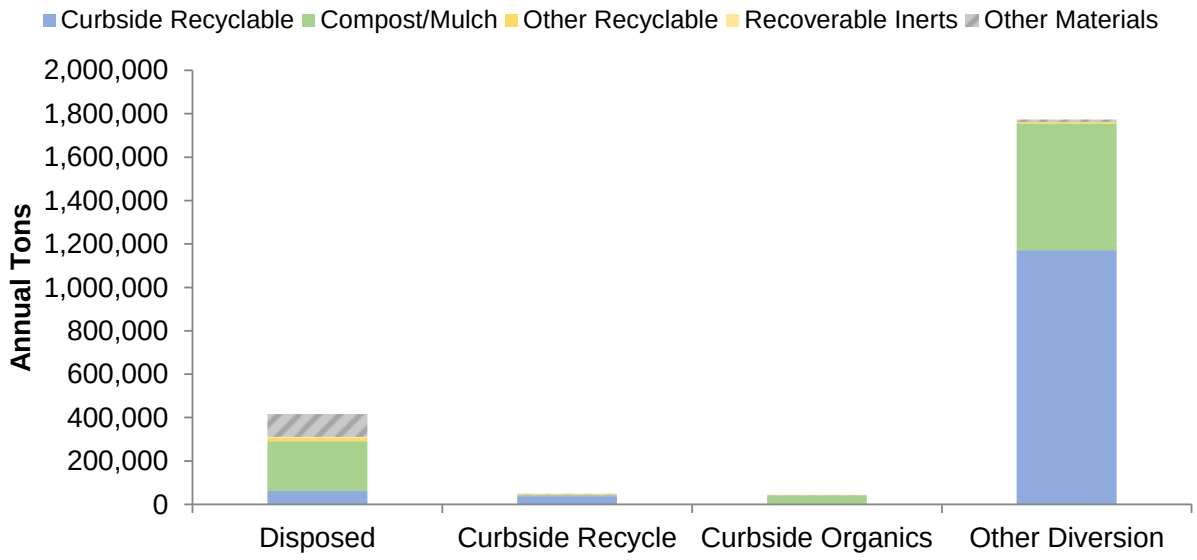


Figure 43 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 43 illustrates, approximately 56 percent of total generation in Group 11 was material in the **Curbside Recyclable** recoverability group, and approximately 38 percent was **Compost/Mulch**. When combined, divertible materials accounted for roughly 95 percent of the Group 11 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 43. Recoverability of Materials Generated in the Retail Trade – Food & Beverage Stores Sector

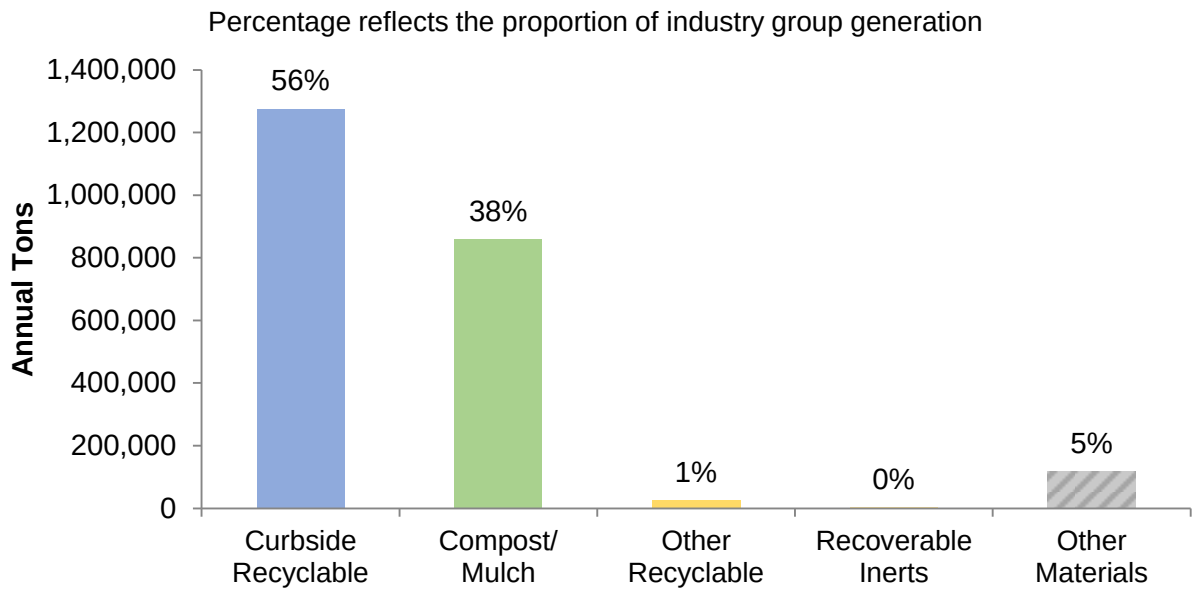


Table 58 presents detailed composition results for each stream in Group 11, as well as for the total group generation.

Table 58. Composition Summary: Retail Trade – Food & Beverage Stores

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**28.2%**	**117,858**	**52.6%**	**26,886**	**10.2%**	**4,504**	**66.2%**	**1,173,870**	**57.9%**	**1,323,118**
Uncoated Corrugated Cardboard	2.5%	10,447	38.0%	19,431	1.9%	830	65.3%	1,158,555	52.0%	1,189,263
Paper Bags	0.4%	1,512	0.9%	451	0.0%	0	0.0%	0	0.1%	1,963
Newspaper	2.3%	9,744	0.0%	9	0.0%	0	0.0%	0	0.4%	9,753
White Ledger Paper	1.0%	4,028	0.6%	303	0.0%	0	0.0%	862	0.2%	5,193
Other Office Paper	1.6%	6,840	2.3%	1,193	0.0%	0	0.0%	130	0.4%	8,163
Magazines and Catalogs	0.2%	911	2.5%	1,285	0.0%	0	0.0%	0	0.1%	2,196
Phone Books and Directories	0.0%	73	0.0%	0	0.0%	0	0.0%	0	0.0%	73
Other Miscellaneous Paper - Compostable	0.7%	2,961	4.2%	2,162	0.8%	348	0.1%	959	0.3%	6,430
Other Miscellaneous Paper - Other	3.2%	13,492	1.9%	967	0.0%	0	0.0%	697	0.7%	15,156
Remainder/Composite Paper - Compostable	9.0%	37,501	0.7%	360	7.5%	3,326	0.7%	12,119	2.3%	53,307
Remainder/Composite Paper - Other	7.3%	30,348	1.4%	725	0.0%	0	0.0%	548	1.4%	31,622
Glass	**2.3%**	**9,451**	**11.6%**	**5,942**	**0.0%**	**0**	**0.4%**	**7,708**	**1.0%**	**23,101**
Clear Glass Bottles and Containers	0.7%	2,809	9.3%	4,746	0.0%	0	0.2%	3,744	0.5%	11,300
Green Glass Bottles and Containers	0.3%	1,346	0.7%	346	0.0%	0	0.1%	2,461	0.2%	4,153
Brown Glass Bottles and Containers	0.7%	2,776	1.7%	849	0.0%	0	0.1%	1,503	0.2%	5,128
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Flat Glass	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Glass	0.6%	2,520	0.0%	0	0.0%	0	0.0%	0	0.1%	2,520
Metal	**2.0%**	**8,394**	**4.9%**	**2,520**	**0.1%**	**56**	**0.1%**	**1,319**	**0.5%**	**12,289**
Tin/Steel Cans	0.4%	1,821	4.0%	2,058	0.0%	0	0.0%	20	0.2%	3,899
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Ferrous	0.6%	2,634	0.0%	0	0.0%	0	0.0%	655	0.1%	3,289
Aluminum Cans	0.3%	1,074	0.4%	208	0.0%	0	0.0%	640	0.1%	1,921
Other Non-Ferrous	0.2%	1,011	0.5%	255	0.1%	56	0.0%	4	0.1%	1,326
Remainder/Composite Metal	0.4%	1,854	0.0%	0	0.0%	0	0.0%	0	0.1%	1,854
Electronics	**0.1%**	**320**	**0.4%**	**219**	**0.0%**	**0**	**0.0%**	**301**	**0.0%**	**840**
Brown Goods	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Computer-related Electronics	0.1%	320	0.0%	0	0.0%	0	0.0%	267	0.0%	587
Other Small Consumer Electronics	0.0%	0	0.4%	219	0.0%	0	0.0%	0	0.0%	219
Video Display Devices	0.0%	0	0.0%	0	0.0%	0	0.0%	34	0.0%	34
Plastic	**16.0%**	**66,645**	**23.6%**	**12,037**	**0.3%**	**125**	**1.1%**	**19,753**	**4.3%**	**98,561**
PETE Plastic Containers	0.7%	2,902	7.0%	3,581	0.0%	5	0.2%	3,214	0.4%	9,701
HDPE Plastic Containers	0.5%	2,127	2.7%	1,390	0.0%	14	0.0%	0	0.2%	3,531
Miscellaneous Plastic Containers	0.5%	1,977	4.4%	2,243	0.0%	0	0.0%	823	0.2%	5,044
Plastic Trash Bags	3.0%	12,394	1.4%	697	0.0%	0	0.0%	870	0.6%	13,961
Plastic Grocery and Other Merchandise Bags	0.4%	1,482	0.4%	195	0.1%	39	0.0%	0	0.1%	1,715
Non-Bag Commercial and Industrial Packaging Film	0.6%	2,494	0.5%	241	0.0%	0	0.4%	6,545	0.4%	9,280
Film Products	0.4%	1,862	0.2%	123	0.0%	0	0.2%	4,144	0.3%	6,129
Other Film - Other	4.8%	20,061	1.3%	640	0.2%	68	0.0%	736	0.9%	21,504
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	207	3.7%	1,870	0.0%	0	0.0%	182	0.1%	2,260
Durable Plastic Items - Other	0.5%	1,933	0.2%	103	0.0%	0	0.1%	1,304	0.1%	3,340
Remainder/Composite Plastic	4.6%	19,207	1.9%	954	0.0%	0	0.1%	1,935	1.0%	22,095
Other Organic	**46.7%**	**195,092**	**6.7%**	**3,435**	**89.4%**	**39,469**	**27.7%**	**491,810**	**31.9%**	**729,806**
Food	41.5%	173,504	6.3%	3,235	61.1%	26,959	27.7%	491,808	30.4%	695,505
Leaves and Grass	1.0%	4,287	0.0%	0	28.3%	12,510	0.0%	0	0.7%	16,797
Prunings and Trimmings	0.1%	356	0.0%	0	0.0%	0	0.0%	0	0.0%	356
Branches and Stumps	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	1.2%	5,197	0.2%	78	0.0%	0	0.0%	2	0.2%	5,277
Carpet	0.5%	2,272	0.0%	0	0.0%	0	0.0%	0	0.1%	2,272
Remainder/Composite Organic	2.3%	9,478	0.2%	122	0.0%	0	0.0%	0	0.4%	9,600
Inerts and Other	**4.4%**	**18,367**	**0.1%**	**61**	**0.0%**	**0**	**4.4%**	**78,072**	**4.2%**	**96,499**
Concrete	0.8%	3,390	0.0%	0	0.0%	0	0.0%	0	0.1%	3,390
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Dimensional Lumber	0.0%	7	0.1%	61	0.0%	0	0.0%	0	0.0%	67
Clean Engineered Wood	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Pallets & Crates	2.4%	9,974	0.0%	0	0.0%	0	4.4%	77,683	3.8%	87,657
Other Wood Waste	0.2%	627	0.0%	0	0.0%	0	0.0%	0	0.0%	627
Gypsum Board	0.0%	8	0.0%	0	0.0%	0	0.0%	0	0.0%	8
Rock, Soil and Fines	0.1%	388	0.0%	0	0.0%	0	0.0%	0	0.0%	388
Remainder/Composite Inerts and Other	1.0%	3,973	0.0%	0	0.0%	0	0.0%	389	0.2%	4,362
Household Hazardous Waste	**0.1%**	**331**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**331**
Paint	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.1%	235	0.0%	0	0.0%	0	0.0%	0	0.0%	235
Batteries	0.0%	12	0.0%	0	0.0%	0	0.0%	0	0.0%	12
Remainder/Composite Household Hazardous	0.0%	84	0.0%	0	0.0%	0	0.0%	0	0.0%	84
Special Waste	**0.1%**	**285**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**316**	**0.0%**	**601**
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	0.0%	0	0.0%	0	0.0%	0	0.0%	316	0.0%	316
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.1%	285	0.0%	0	0.0%	0	0.0%	0	0.0%	285
Mixed Residue	**0.3%**	**1,047**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**1,047**
Totals	**100.0%**	**417,791**	**100.0%**	**51,099**	**100.0%**	**44,153**	**100.0%**	**1,773,150**	**100.0%**	**2,286,193**
Streams Sampled	53		12		5		79		**149**	
TPEPY	1.21		0.15		0.13		5.15		**6.64**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Retail Trade – All Other

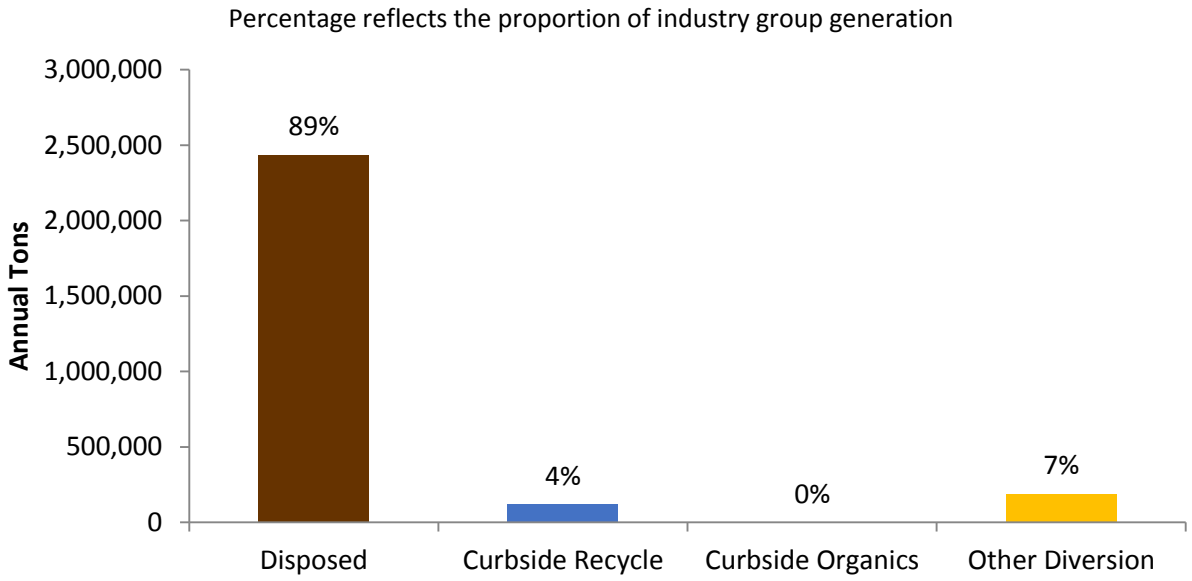
Table 59 presents key findings for the Retail Trade – All Other industry group (Group 12). Statewide, Group 12 disposed of more than 2.4 million tons and diverted approximately 306,000 tons. Total generation was approximately 2.41 TPEPY. *Food* was the most prevalent divertible material type in the Group 12 Disposed stream, accounting for 18 percent of disposal.

Table 59. Key Findings and Metrics: Retail Trade – All Other

Retail Trade - All Other				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
2.14	0.27	2,433,989	306,012	11%
Top Three Diversion Opportunities in Disposed Stream				
• Food (18%, 437,469 tons) • Remainder/Composite Paper - Compostable (9%, 209,655 tons) • Clean Pallets & Crates (6%, 135,886 tons)				

The Disposed stream accounted for approximately 89 percent of Group 12 generation. Figure 44 presents the annual tons for each stream in Group 12. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins.

Figure 44. Annual Tons by Waste Stream: Retail Trade – All Other



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 45 breaks down the potential recoverability (by recoverability group) for each stream in Group 12. As shown, approximately two-thirds of the Disposed stream was divertible, mostly **Compost/Mulch** materials.

The Group 12 Curbside Recycle contamination rate was 18 percent. The study did not include any sites from this group with Curbside Organics.

Figure 45. Recoverability by Stream: Retail Trade – All Other

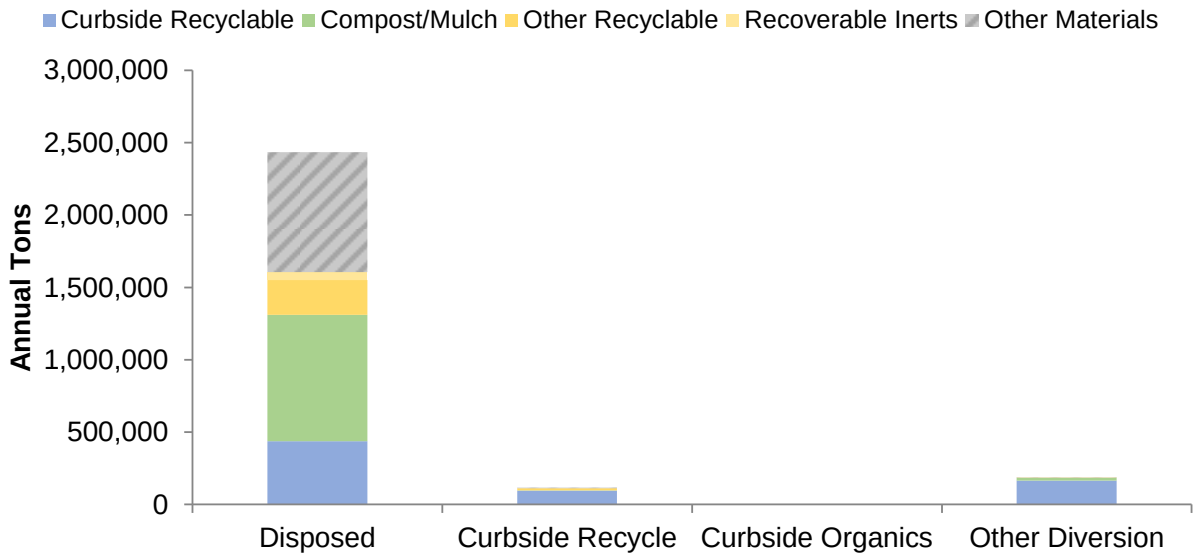


Figure 46 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 46 illustrates, one-third of total generation in Group 12 was material in the **Compost/Mulch** recoverability group, and approximately 30 percent was **Other Materials**. When combined, divertible materials accounted for roughly 70 percent of the Group 12 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 46. Recoverability of Materials Generated in the Retail Trade – All Other Sector

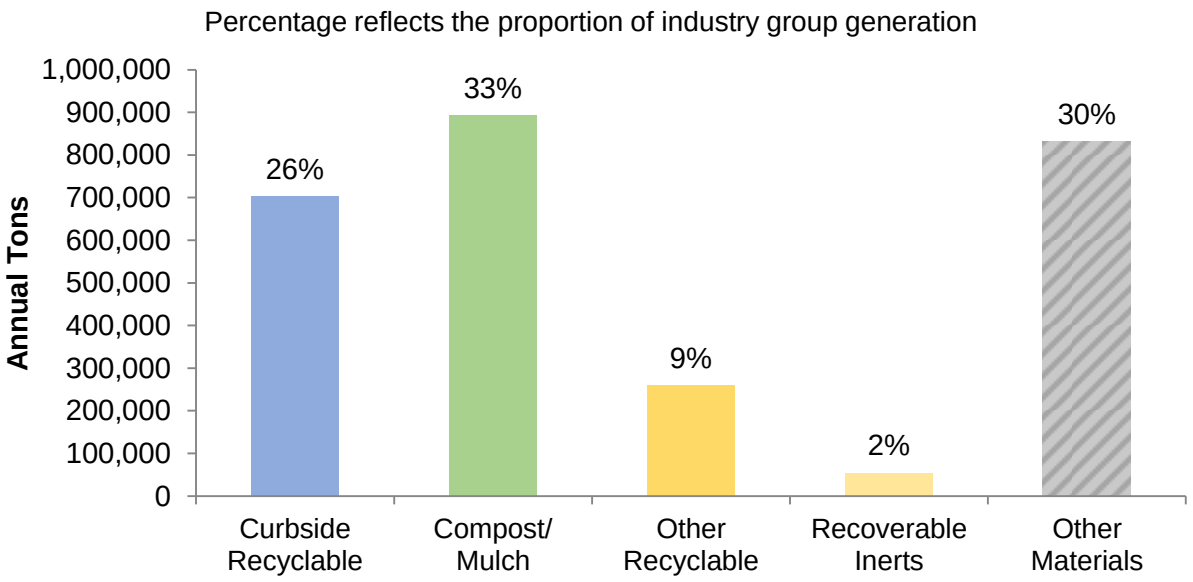


Table 60 presents detailed composition results for each stream in Group 12, as well as for the total group generation.

Table 60. Composition Summary: Retail Trade – All Other

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**26.2%**	**637,019**	**81.5%**	**96,102**	**-**	**-**	**87.8%**	**165,287**	**32.8%**	**898,407**
Uncoated Corrugated Cardboard	3.6%	86,682	72.1%	84,949	-	-	87.8%	165,222	12.3%	336,853
Paper Bags	0.5%	11,311	0.7%	855	-	-	0.0%	0	0.4%	12,165
Newspaper	1.9%	45,206	0.2%	228	-	-	0.0%	0	1.7%	45,435
White Ledger Paper	1.9%	45,331	0.9%	1,092	-	-	0.0%	0	1.7%	46,424
Other Office Paper	2.2%	52,929	0.9%	1,094	-	-	0.0%	65	2.0%	54,087
Magazines and Catalogs	0.7%	17,659	1.5%	1,751	-	-	0.0%	0	0.7%	19,410
Phone Books and Directories	0.0%	953	0.2%	214	-	-	0.0%	0	0.0%	1,167
Other Miscellaneous Paper - Compostable	0.4%	9,578	1.0%	1,172	-	-	0.0%	0	0.4%	10,750
Other Miscellaneous Paper - Other	3.4%	83,610	3.7%	4,326	-	-	0.0%	0	3.2%	87,935
Remainder/Composite Paper - Compostable	8.6%	209,655	0.2%	216	-	-	0.0%	0	7.7%	209,871
Remainder/Composite Paper - Other	3.0%	74,105	0.2%	205	-	-	0.0%	0	2.7%	74,311
Glass	**2.1%**	**51,520**	**0.2%**	**284**	**-**	**-**	**0.2%**	**351**	**1.9%**	**52,154**
Clear Glass Bottles and Containers	1.4%	33,128	0.2%	216	-	-	0.2%	351	1.2%	33,695
Green Glass Bottles and Containers	0.3%	6,107	0.0%	0	-	-	0.0%	0	0.2%	6,107
Brown Glass Bottles and Containers	0.2%	4,042	0.1%	68	-	-	0.0%	0	0.1%	4,109
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Flat Glass	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Remainder/Composite Glass	0.3%	8,242	0.0%	0	-	-	0.0%	0	0.3%	8,242
Metal	**5.7%**	**139,103**	**1.5%**	**1,795**	**-**	**-**	**0.3%**	**624**	**5.2%**	**141,522**
Tin/Steel Cans	0.3%	6,190	0.0%	44	-	-	0.0%	0	0.2%	6,235
Major Appliances	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Used Oil Filters	0.0%	748	0.0%	0	-	-	0.0%	0	0.0%	748
Other Ferrous	1.4%	34,307	1.0%	1,130	-	-	0.1%	227	1.3%	35,664
Aluminum Cans	0.2%	5,607	0.1%	89	-	-	0.2%	321	0.2%	6,017
Other Non-Ferrous	0.9%	21,774	0.1%	146	-	-	0.0%	76	0.8%	21,996
Remainder/Composite Metal	2.9%	70,476	0.3%	386	-	-	0.0%	0	2.6%	70,862
Electronics	**0.2%**	**5,843**	**0.0%**	**42**	**-**	**-**	**0.7%**	**1,343**	**0.3%**	**7,228**
Brown Goods	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Computer-related Electronics	0.0%	0	0.0%	0	-	-	0.7%	1,343	0.0%	1,343
Other Small Consumer Electronics	0.1%	2,393	0.0%	42	-	-	0.0%	0	0.1%	2,434
Video Display Devices	0.1%	3,450	0.0%	0	-	-	0.0%	0	0.1%	3,450
Plastic	**13.6%**	**331,572**	**9.7%**	**11,488**	**-**	**-**	**1.2%**	**2,257**	**12.6%**	**345,316**
PETE Plastic Containers	0.9%	21,814	0.5%	546	-	-	0.6%	1,199	0.9%	23,559
HDPE Plastic Containers	0.5%	13,148	0.8%	892	-	-	0.0%	39	0.5%	14,079
Miscellaneous Plastic Containers	0.2%	5,209	0.1%	122	-	-	0.0%	0	0.2%	5,331
Plastic Trash Bags	2.1%	50,209	0.1%	121	-	-	0.0%	52	1.8%	50,381
Plastic Grocery and Other Merchandise Bags	0.3%	6,896	4.0%	4,687	-	-	0.0%	0	0.4%	11,583
Non-Bag Commercial and Industrial Packaging Film	0.6%	15,208	1.9%	2,274	-	-	0.5%	968	0.7%	18,449
Film Products	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Other Film - Other	2.5%	61,325	1.1%	1,281	-	-	0.0%	0	2.3%	62,605
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	4,499	0.0%	0	-	-	0.0%	0	0.2%	4,499
Durable Plastic Items - Other	2.0%	49,853	0.2%	270	-	-	0.0%	0	1.8%	50,123
Remainder/Composite Plastic	4.2%	103,411	1.1%	1,296	-	-	0.0%	0	3.8%	104,707
Other Organic	**33.8%**	**822,508**	**6.7%**	**7,898**	**-**	**-**	**1.6%**	**2,956**	**30.4%**	**833,362**
Food	18.0%	437,469	0.8%	908	-	-	1.6%	2,956	16.1%	441,333
Leaves and Grass	2.4%	58,655	0.0%	0	-	-	0.0%	0	2.1%	58,655
Prunings and Trimmings	0.4%	9,855	0.0%	0	-	-	0.0%	0	0.4%	9,855
Branches and Stumps	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Manures	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Textiles	4.4%	107,155	0.0%	1	-	-	0.0%	0	3.9%	107,156
Carpet	1.7%	40,931	5.9%	6,989	-	-	0.0%	0	1.7%	47,919
Remainder/Composite Organic	6.9%	168,443	0.0%	0	-	-	0.0%	0	6.1%	168,443
Inerts and Other	**16.2%**	**394,471**	**0.1%**	**131**	**-**	**-**	**7.9%**	**14,951**	**14.9%**	**409,554**
Concrete	0.0%	25	0.0%	0	-	-	0.0%	0	0.0%	25
Asphalt Paving	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Asphalt Roofing	0.2%	4,760	0.0%	0	-	-	0.0%	0	0.2%	4,760
Clean Dimensional Lumber	0.4%	10,646	0.1%	131	-	-	0.0%	0	0.4%	10,777
Clean Engineered Wood	0.0%	332	0.0%	0	-	-	0.0%	0	0.0%	332
Clean Pallets & Crates	5.6%	135,886	0.0%	0	-	-	7.9%	14,951	5.5%	150,838
Other Wood Waste	3.3%	80,619	0.0%	0	-	-	0.0%	0	2.9%	80,619
Gypsum Board	1.4%	34,448	0.0%	0	-	-	0.0%	0	1.3%	34,448
Rock, Soil and Fines	0.6%	14,668	0.0%	0	-	-	0.0%	0	0.5%	14,668
Remainder/Composite Inerts and Other	4.6%	113,086	0.0%	0	-	-	0.0%	0	4.1%	113,086
Household Hazardous Waste	**0.2%**	**5,239**	**0.0%**	**13**	**-**	**-**	**0.0%**	**0**	**0.2%**	**5,251**
Paint	0.0%	464	0.0%	0	-	-	0.0%	0	0.0%	464
Vehicle and Equipment Fluids	0.1%	3,266	0.0%	0	-	-	0.0%	0	0.1%	3,266
Used Oil	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Batteries	0.0%	312	0.0%	0	-	-	0.0%	0	0.0%	312
Remainder/Composite Household Hazardous	0.0%	1,196	0.0%	13	-	-	0.0%	0	0.0%	1,209
Special Waste	**1.6%**	**39,654**	**0.0%**	**0**	**-**	**-**	**0.2%**	**383**	**1.5%**	**40,037**
Ash	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Bulky Items	1.6%	39,255	0.0%	0	-	-	0.2%	383	1.4%	39,638
Tires	0.0%	0	0.0%	0	-	-	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	399	0.0%	0	-	-	0.0%	0	0.0%	399
Mixed Residue	**0.3%**	**7,062**	**0.1%**	**108**	**-**	**-**	**0.0%**	**0**	**0.3%**	**7,170**
Totals	**100.0%**	**2,433,989**	**100.0%**	**117,861**	**-**	**-**	**100.0%**	**188,152**	**100.0%**	**2,740,001**
Streams Sampled	53		18		0		26		**97**	
TPEPY	2.14		0.10		0.00		0.17		**2.41**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Services – Management, Administrative, Support, & Social

Table 61 presents key findings for the Services – Management, Administrative, Support, & Social industry group (Group 13). Statewide, Group 13 disposed of more than 1.5 million tons and diverted more than 1.4 million tons. Total generation was approximately 1.44 TPEPY. *Food* was the most prevalent divertible material type in the Group 13 Disposed stream, accounting for 25 percent of disposal.

Table 61. Key Findings and Metrics: Services – Management, Administrative, Support, & Social

Services - Management, Administrative, Support, & Social				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.74	0.70	1,514,667	1,417,462	48%
Top Three Diversion Opportunities in Disposed Stream				
• Food (25%, 376,502 tons) • Remainder/Composite Paper - Compostable (11%, 164,498 tons) • Leaves and Grass (6%, 86,284 tons)				

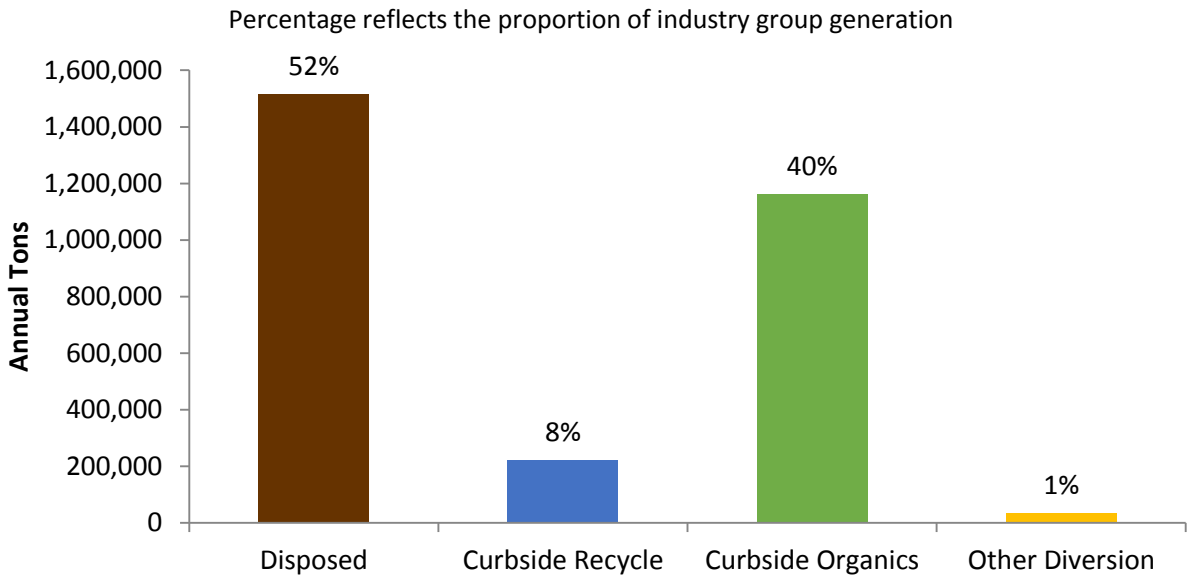
For Group 13, in addition to normalizing generation on a per employee basis (TPEPY), the project team normalized generation by the estimated amount of office space occupied by each generator site. As shown in Table 62, Group 13 businesses generated an estimated 2.83 tons per thousand square feet of office space per year. The number of sites used in this calculation is noted in Table 98 in Appendix C: Description of Calculations.

Table 62. Generation Rate Summary by Weight: Services – Management, Administrative, Support, & Social (tons per 1,000 sq. ft. per year)

Tons per 1,000 Sq. Ft. per Year	**Disposed**	**Curbside Recycle**	**Curbside Organics**	**Other Diversion**	**Generation**
Services - Management, Administrative, Support, & Social	1.18	0.20	1.41	0.04	**2.83**

Figure 47 presents the annual tons for each stream in Group 13. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means, such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. Curbside Organics are 40 percent of total generation in Group 13. This group includes property management agencies and landscapers, some of whom haul grass and prunings collected on the job to a central yard, where they are collected as part of the business' Curbside Organics stream.

Figure 47. Annual Tons by Waste Stream: Services – Management, Administrative, Support, & Social



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 48 breaks down the potential recoverability (by recoverability group) for each stream in Group 13. As shown, **Compost/Mulch** materials accounted for almost half of the Disposed stream.

The Group 13 Curbside Recycle contamination rate was 30 percent. No contamination was observed in the Curbside Organics stream.

Figure 48. Recoverability by Stream: Services – Management, Administrative, Support, & Social

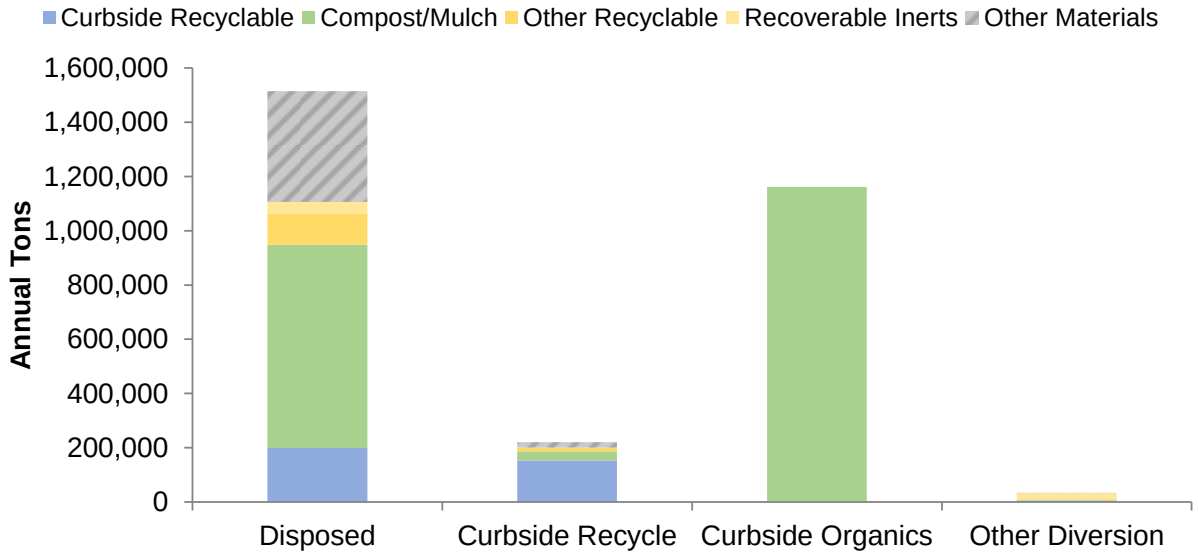


Figure 49 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 49 illustrates, approximately 66 percent of total generation in Group 13 was material in the **Compost/Mulch** recoverability group, and approximately 15 percent was **Other Materials**. When combined, divertible materials accounted for roughly 85 percent of the Group 13 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 49. Recoverability of Materials Generated in the Services – Management, Administrative, Support, & Social Sector

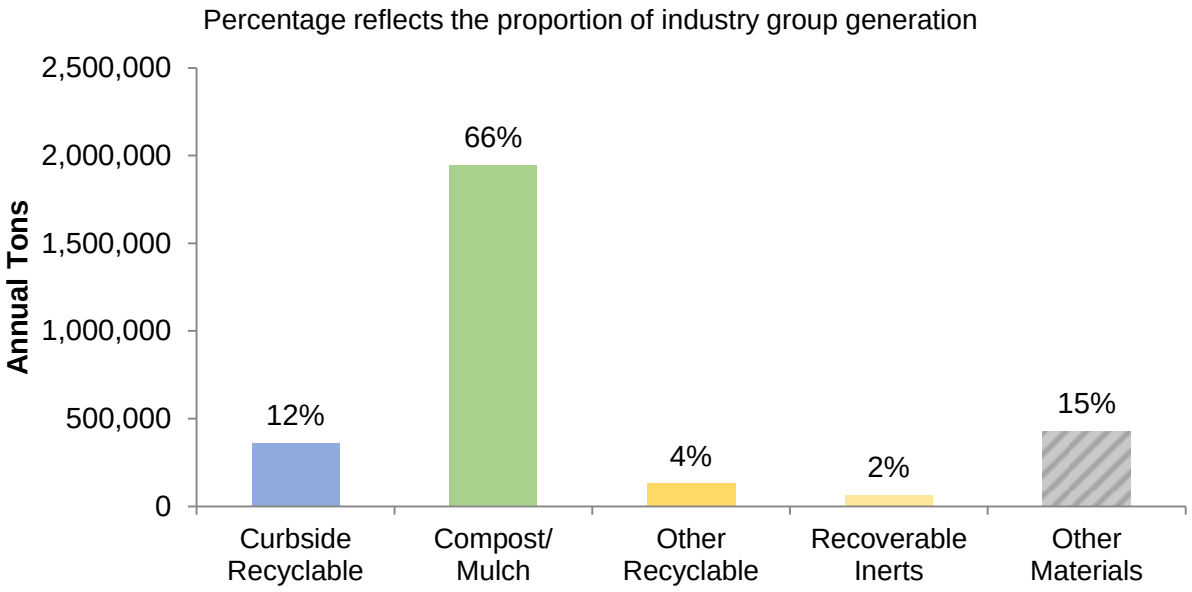


Table 63 presents detailed composition results for each stream in Group 13, as well as for the total group generation.

Table 63. Composition Summary: Services – Management, Administrative, Support, & Social

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**24.1%**	**364,763**	**70.5%**	**156,104**	**0.0%**	**0**	**10.7%**	**3,690**	**17.9%**	**524,557**
Uncoated Corrugated Cardboard	1.7%	25,078	36.1%	80,005	0.0%	0	1.6%	551	3.6%	105,634
Paper Bags	0.4%	5,872	1.3%	2,877	0.0%	0	0.1%	26	0.3%	8,774
Newspaper	1.4%	20,872	1.5%	3,293	0.0%	0	0.0%	0	0.8%	24,165
White Ledger Paper	1.6%	24,164	9.4%	20,819	0.0%	0	1.1%	390	1.5%	45,373
Other Office Paper	2.1%	31,117	4.4%	9,740	0.0%	0	6.9%	2,382	1.5%	43,239
Magazines and Catalogs	0.8%	12,419	4.2%	9,202	0.0%	0	0.2%	63	0.7%	21,684
Phone Books and Directories	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Miscellaneous Paper - Compostable	0.3%	4,711	3.1%	6,879	0.0%	0	0.5%	175	0.4%	11,766
Other Miscellaneous Paper - Other	3.2%	48,264	4.6%	10,106	0.0%	0	0.1%	26	2.0%	58,395
Remainder/Composite Paper - Compostable	10.9%	164,498	2.3%	4,984	0.0%	0	0.2%	70	5.8%	169,552
Remainder/Composite Paper - Other	1.8%	27,769	3.7%	8,200	0.0%	0	0.0%	7	1.2%	35,977
Glass	**1.4%**	**21,391**	**4.7%**	**10,324**	**0.0%**	**0**	**2.5%**	**870**	**1.1%**	**32,586**
Clear Glass Bottles and Containers	0.5%	7,579	1.9%	4,160	0.0%	0	2.5%	870	0.4%	12,609
Green Glass Bottles and Containers	0.0%	703	1.8%	4,000	0.0%	0	0.0%	0	0.2%	4,703
Brown Glass Bottles and Containers	0.0%	359	0.5%	1,194	0.0%	0	0.0%	0	0.1%	1,553
Other Glass Colored Bottles and Containers	0.0%	406	0.0%	0	0.0%	0	0.0%	0	0.0%	406
Flat Glass	0.6%	9,736	0.0%	0	0.0%	0	0.0%	0	0.3%	9,736
Remainder/Composite Glass	0.2%	2,608	0.4%	970	0.0%	0	0.0%	0	0.1%	3,578
Metal	**3.6%**	**54,110**	**2.7%**	**5,994**	**0.0%**	**0**	**1.8%**	**626**	**2.1%**	**60,731**
Tin/Steel Cans	0.4%	5,337	1.7%	3,807	0.0%	0	0.1%	40	0.3%	9,184
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	42	0.0%	0	0.0%	0	0.0%	0	0.0%	42
Other Ferrous	0.5%	7,023	0.1%	274	0.0%	0	0.7%	225	0.3%	7,523
Aluminum Cans	0.2%	2,951	0.1%	163	0.0%	0	1.0%	357	0.1%	3,471
Other Non-Ferrous	1.5%	22,479	0.8%	1,725	0.0%	0	0.0%	4	0.8%	24,208
Remainder/Composite Metal	1.1%	16,278	0.0%	25	0.0%	0	0.0%	0	0.6%	16,303
Electronics	**2.0%**	**29,910**	**0.1%**	**286**	**0.0%**	**0**	**4.7%**	**1,622**	**1.1%**	**31,818**
Brown Goods	0.1%	1,273	0.0%	0	0.0%	0	0.1%	51	0.0%	1,324
Computer-related Electronics	0.1%	993	0.1%	286	0.0%	0	2.8%	966	0.1%	2,245
Other Small Consumer Electronics	0.0%	104	0.0%	0	0.0%	0	0.0%	0	0.0%	104
Video Display Devices	1.8%	27,541	0.0%	0	0.0%	0	1.7%	605	1.0%	28,145
Plastic	**10.8%**	**163,240**	**10.0%**	**22,056**	**0.0%**	**0**	**6.3%**	**2,187**	**6.4%**	**187,483**
PETE Plastic Containers	0.4%	5,933	1.3%	2,822	0.0%	0	0.6%	208	0.3%	8,963
HDPE Plastic Containers	0.3%	4,245	0.3%	610	0.0%	0	1.5%	502	0.2%	5,356
Miscellaneous Plastic Containers	0.3%	4,984	0.5%	1,118	0.0%	0	0.1%	31	0.2%	6,133
Plastic Trash Bags	2.2%	33,468	0.5%	1,153	0.0%	0	0.0%	0	1.2%	34,621
Plastic Grocery and Other Merchandise Bags	0.2%	3,121	0.7%	1,476	0.0%	0	0.0%	0	0.2%	4,597
Non-Bag Commercial and Industrial Packaging Film	0.0%	604	0.0%	4	0.0%	0	0.0%	0	0.0%	608
Film Products	0.0%	61	0.0%	8	0.0%	0	0.0%	0	0.0%	70
Other Film - Other	1.5%	23,259	0.6%	1,270	0.0%	0	0.0%	0	0.8%	24,529
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	557	2.9%	6,342	0.0%	0	4.1%	1,430	0.3%	8,329
Durable Plastic Items - Other	1.1%	15,913	1.8%	3,974	0.0%	0	0.0%	0	0.7%	19,887
Remainder/Composite Plastic	4.7%	71,096	1.5%	3,278	0.0%	0	0.0%	16	2.5%	74,390
Other Organic	**45.3%**	**685,882**	**11.5%**	**25,423**	**100.0%**	**1,161,461**	**5.3%**	**1,823**	**63.9%**	**1,874,588**
Food	24.9%	376,502	1.8%	3,882	0.0%	184	5.3%	1,823	13.0%	382,390
Leaves and Grass	5.7%	86,284	0.0%	0	98.8%	1,147,946	0.0%	0	42.1%	1,234,230
Prunings and Trimmings	2.9%	43,907	0.0%	0	1.1%	13,331	0.0%	0	2.0%	57,237
Branches and Stumps	0.2%	3,631	8.0%	17,723	0.0%	0	0.0%	0	0.7%	21,355
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	2.3%	35,448	1.2%	2,731	0.0%	0	0.0%	0	1.3%	38,178
Carpet	1.0%	15,305	0.0%	0	0.0%	0	0.0%	0	0.5%	15,305
Remainder/Composite Organic	8.2%	124,806	0.5%	1,087	0.0%	0	0.0%	0	4.3%	125,893
Inerts and Other	**11.9%**	**180,738**	**0.3%**	**587**	**0.0%**	**0**	**67.7%**	**23,419**	**7.0%**	**204,745**
Concrete	0.1%	1,942	0.0%	0	0.0%	0	0.0%	0	0.1%	1,942
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	42	0.0%	50	0.0%	0	0.0%	0	0.0%	92
Clean Dimensional Lumber	0.6%	8,881	0.0%	0	0.0%	0	0.0%	0	0.3%	8,881
Clean Engineered Wood	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Clean Pallets & Crates	4.0%	60,814	0.0%	0	0.0%	0	0.0%	0	2.1%	60,814
Other Wood Waste	4.3%	65,386	0.0%	0	0.0%	0	0.0%	0	2.2%	65,386
Gypsum Board	1.4%	20,486	0.2%	537	0.0%	0	0.0%	0	0.7%	21,024
Rock, Soil and Fines	1.3%	19,958	0.0%	0	0.0%	0	67.7%	23,419	1.5%	43,378
Remainder/Composite Inerts and Other	0.2%	3,229	0.0%	0	0.0%	0	0.0%	0	0.1%	3,229
Household Hazardous Waste	**0.3%**	**4,997**	**0.0%**	**77**	**0.0%**	**0**	**0.1%**	**34**	**0.2%**	**5,108**
Paint	0.1%	1,061	0.0%	0	0.0%	0	0.0%	0	0.0%	1,061
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	61	0.0%	66	0.0%	0	0.1%	34	0.0%	160
Remainder/Composite Household Hazardous	0.3%	3,876	0.0%	11	0.0%	0	0.0%	0	0.1%	3,887
Special Waste	**0.2%**	**3,177**	**0.1%**	**287**	**0.0%**	**0**	**0.9%**	**312**	**0.1%**	**3,776**
Ash	0.1%	1,286	0.0%	0	0.0%	0	0.0%	0	0.0%	1,286
Treated Medical Waste	0.1%	1,712	0.0%	0	0.0%	0	0.0%	0	0.1%	1,712
Bulky Items	0.0%	0	0.0%	0	0.0%	0	0.9%	312	0.0%	312
Tires	0.0%	180	0.0%	0	0.0%	0	0.0%	0	0.0%	180
Remainder/Composite Special Waste	0.0%	0	0.1%	287	0.0%	0	0.0%	0	0.0%	287
Mixed Residue	**0.4%**	**6,457**	**0.1%**	**280**	**0.0%**	**0**	**0.0%**	**0**	**0.2%**	**6,738**
Totals	**100.0%**	**1,514,667**	**100.0%**	**221,419**	**100.0%**	**1,161,461**	**100.0%**	**34,583**	**100.0%**	**2,932,129**
Streams Sampled	54		26		6		21		**107**	
TPEPY	0.74		0.11		0.57		0.02		**1.44**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Services – Professional, Technical, & Financial

Table 64 presents key findings for the Services – Professional, Technical, & Financial industry group (Group 14). Example business types in this group include banks, real estate agencies, architecture firms, and engineering companies. Statewide, the Group 14 total generation rate is 2.31 TPEPY. With more than 2.1 million employees (the most of any industry group), this group disposed of nearly 4 million tons and diverted nearly 950,000 tons. Group 14 accounted for approximately 19 percent of the overall commercial sector generation, making it the largest generator in the state. This group disposed of nearly 396,000 tons of *remainder/composite paper – compostable*, the most prevalent divertible material type in the Group 14 Disposed stream.

Table 64: Key Findings and Metrics: Services – Professional, Technical, & Financial

Services - Professional, Technical, & Financial				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
1.86	0.44	3,994,643	949,869	19%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (10%, 395,521 tons) • Clean Pallets & Crates (8%, 332,687 tons) • Food (8%, 330,452 tons)				

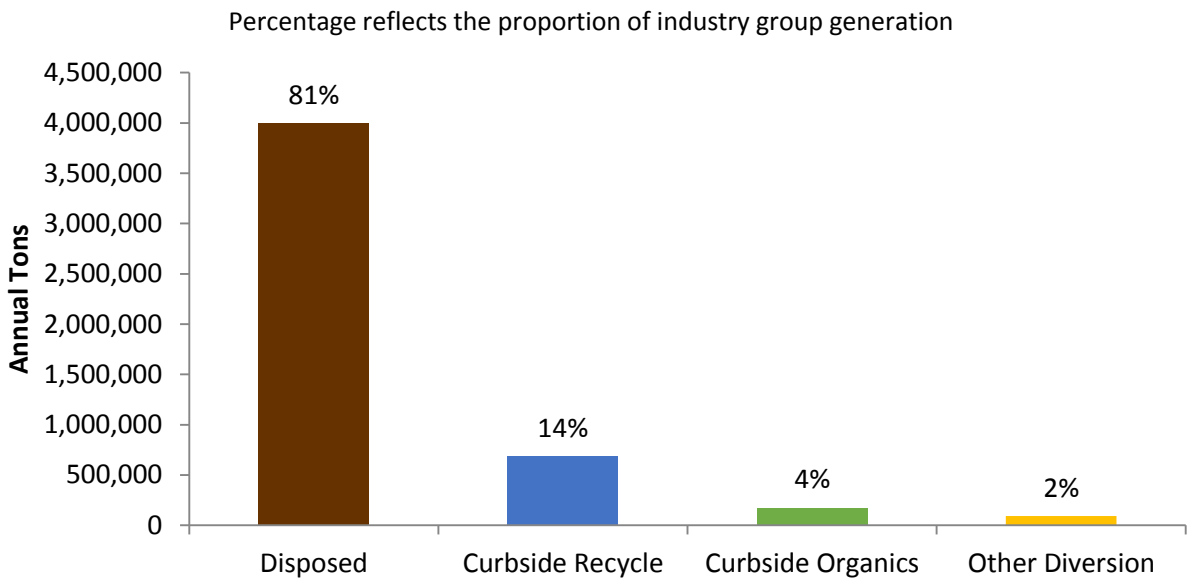
In addition to normalizing generation on a per employee basis (TPEPY), the project team normalized generation by the estimated amount of office space occupied by each generator site. As shown in Table 65, Group 14 businesses generated an estimated 2.37 tons per thousand square feet of office space per year. The number of sites used in this calculation is noted in Table 98 in Appendix C: Description of Calculations.

Table 65: Generation Rate Summary by Weight: Professional, Technical, & Financial (tons per 1,000 Sq. Ft. per year)

Tons per 1,000 Sq. Ft. per Year	**Disposed**	**Curbside Recycle**	**Curbside Organics**	**Other Diversion**	**Generation**
Services - Professional, Technical, & Financial	2.01	0.29	0.01	0.05	**2.37**

Figure 50 presents the annual tons for each stream in Group 14. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means, such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams, such as food in recycling bins or glass in organics bins. As shown, approximately 81 percent of total generation in Group 14 went to the Disposed stream.

Figure 50. Annual Tons by Waste Stream: Services – Professional, Technical, & Financial



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 51 breaks down the potential recoverability (by recoverability group) for each stream in Group 14. As shown, more than one-third of the Disposed stream was **Compost/Mulch** materials.

The Group 14 Curbside Recycle contamination rate was 11 percent, and the Curbside Organics contamination rate was 1 percent.

Figure 51. Recoverability by Stream: Services – Professional, Technical, & Financial

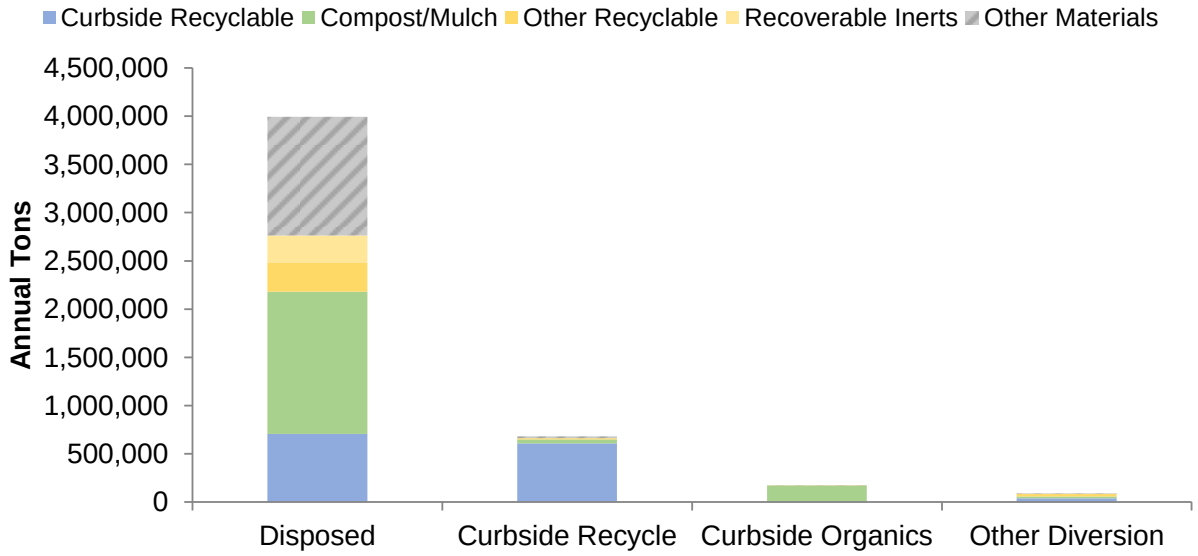


Figure 52 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 52 illustrates, approximately 35 percent of total generation in Group 14 was material in the **Compost/Mulch** recoverability group, and approximately 28 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 75 percent of the Group 14 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 52. Recoverability of Materials Generated in the Services – Professional, Technical, & Financial Sector

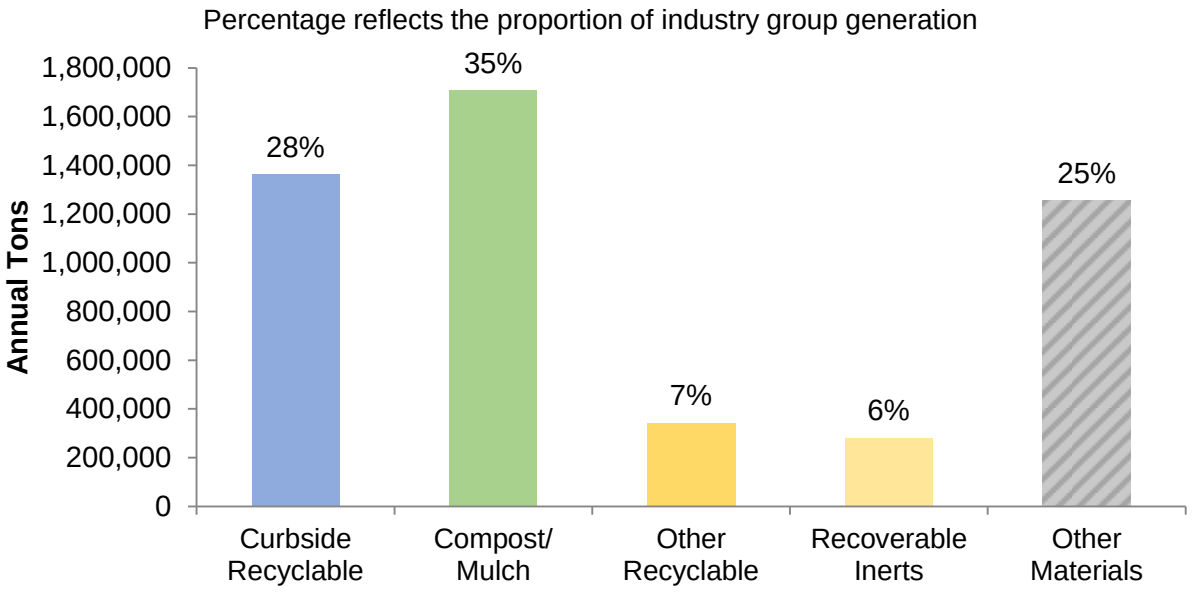


Table 66 presents detailed composition results for each stream in Group 14, as well as for the total group generation.

Table 66. Composition Summary: Services – Professional, Technical, & Financial

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**29.1%**	**1,162,870**	**86.1%**	**588,519**	**0.7%**	**1,301**	**40.9%**	**37,407**	**36.2%**	**1,790,097**
Uncoated Corrugated Cardboard	4.1%	161,826	51.0%	348,608	0.0%	57	17.7%	16,167	10.7%	526,659
Paper Bags	0.5%	18,127	0.5%	3,124	0.0%	30	0.1%	90	0.4%	21,370
Newspaper	2.5%	98,110	3.2%	22,136	0.1%	107	0.4%	382	2.4%	120,735
White Ledger Paper	2.1%	82,352	7.9%	54,347	0.0%	42	4.4%	3,983	2.8%	140,724
Other Office Paper	2.4%	95,669	3.7%	25,540	0.2%	413	8.0%	7,353	2.6%	128,974
Magazines and Catalogs	1.0%	37,985	4.9%	33,581	0.0%	0	0.7%	625	1.5%	72,191
Phone Books and Directories	0.0%	1,100	0.0%	0	0.0%	0	0.0%	0	0.0%	1,100
Other Miscellaneous Paper - Compostable	0.6%	23,243	4.0%	27,383	0.4%	635	0.0%	1	1.0%	51,262
Other Miscellaneous Paper - Other	3.0%	121,279	10.2%	69,785	0.0%	11	9.6%	8,734	4.0%	199,810
Remainder/Composite Paper - Compostable	9.9%	395,521	0.2%	1,269	0.0%	6	0.0%	0	8.0%	396,796
Remainder/Composite Paper - Other	3.2%	127,658	0.4%	2,747	0.0%	0	0.1%	72	2.6%	130,478
Glass	**1.4%**	**55,539**	**3.5%**	**23,814**	**0.0%**	**32**	**1.1%**	**1,022**	**1.6%**	**80,408**
Clear Glass Bottles and Containers	0.5%	20,340	2.5%	16,890	0.0%	32	0.4%	403	0.8%	37,665
Green Glass Bottles and Containers	0.4%	17,581	0.5%	3,233	0.0%	0	0.3%	238	0.4%	21,052
Brown Glass Bottles and Containers	0.1%	3,228	0.5%	3,691	0.0%	0	0.4%	373	0.1%	7,293
Other Glass Colored Bottles and Containers	0.0%	203	0.0%	0	0.0%	0	0.0%	0	0.0%	203
Flat Glass	0.0%	943	0.0%	0	0.0%	0	0.0%	0	0.0%	943
Remainder/Composite Glass	0.3%	13,244	0.0%	0	0.0%	0	0.0%	7	0.3%	13,251
Metal	**4.1%**	**162,103**	**0.7%**	**4,567**	**0.0%**	**23**	**28.0%**	**25,586**	**3.9%**	**192,279**
Tin/Steel Cans	0.2%	8,843	0.2%	1,061	0.0%	0	0.0%	18	0.2%	9,922
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Ferrous	1.2%	46,400	0.1%	765	0.0%	0	20.0%	18,258	1.3%	65,423
Aluminum Cans	0.1%	3,860	0.3%	1,911	0.0%	23	0.5%	459	0.1%	6,253
Other Non-Ferrous	0.9%	37,317	0.1%	511	0.0%	0	1.8%	1,657	0.8%	39,485
Remainder/Composite Metal	1.6%	65,683	0.0%	320	0.0%	0	5.7%	5,193	1.4%	71,196
Electronics	**2.0%**	**78,459**	**0.1%**	**379**	**0.0%**	**13**	**1.4%**	**1,245**	**1.6%**	**80,097**
Brown Goods	0.6%	23,189	0.0%	0	0.0%	0	0.0%	0	0.5%	23,189
Computer-related Electronics	0.0%	0	0.0%	254	0.0%	0	1.3%	1,199	0.0%	1,453
Other Small Consumer Electronics	0.0%	60	0.0%	125	0.0%	13	0.0%	6	0.0%	204
Video Display Devices	1.4%	55,210	0.0%	0	0.0%	0	0.0%	40	1.1%	55,250
Plastic	**13.2%**	**528,834**	**8.0%**	**54,425**	**0.2%**	**397**	**1.8%**	**1,649**	**11.8%**	**585,305**
PETE Plastic Containers	0.4%	14,736	1.0%	6,783	0.1%	147	1.3%	1,225	0.5%	22,890
HDPE Plastic Containers	0.4%	15,241	0.3%	2,043	0.0%	2	0.5%	412	0.4%	17,698
Miscellaneous Plastic Containers	0.2%	8,521	2.7%	18,616	0.0%	84	0.0%	11	0.6%	27,232
Plastic Trash Bags	1.9%	75,623	0.1%	639	0.0%	50	0.0%	0	1.5%	76,313
Plastic Grocery and Other Merchandise Bags	0.2%	7,788	0.0%	313	0.0%	0	0.0%	0	0.2%	8,102
Non-Bag Commercial and Industrial Packaging Film	0.8%	33,130	1.6%	10,680	0.0%	0	0.0%	0	0.9%	43,809
Film Products	0.0%	0	0.0%	150	0.0%	0	0.0%	0	0.0%	151
Other Film - Other	2.2%	86,837	0.2%	1,358	0.0%	54	0.0%	0	1.8%	88,249
Durable Plastic Items - #2 and #5 Bulky Rigids	0.4%	15,730	0.0%	149	0.0%	0	0.0%	0	0.3%	15,879
Durable Plastic Items - Other	1.1%	45,243	0.0%	110	0.0%	57	0.0%	0	0.9%	45,410
Remainder/Composite Plastic	5.7%	225,985	2.0%	13,584	0.0%	2	0.0%	0	4.8%	239,572
Other Organic	**23.1%**	**922,506**	**0.1%**	**996**	**99.0%**	**173,063**	**8.2%**	**7,527**	**22.3%**	**1,104,092**
Food	8.3%	330,452	0.1%	483	0.1%	203	5.1%	4,674	6.8%	335,811
Leaves and Grass	3.4%	136,387	0.0%	0	98.8%	172,743	3.1%	2,853	6.3%	311,983
Prunings and Trimmings	3.2%	127,780	0.0%	0	0.0%	0	0.0%	0	2.6%	127,780
Branches and Stumps	0.2%	9,686	0.0%	0	0.0%	0	0.0%	0	0.2%	9,686
Manures	0.0%	1,478	0.0%	0	0.0%	0	0.0%	0	0.0%	1,478
Textiles	2.1%	84,487	0.1%	514	0.1%	117	0.0%	0	1.7%	85,118
Carpet	0.6%	23,797	0.0%	0	0.0%	0	0.0%	0	0.5%	23,797
Remainder/Composite Organic	5.2%	208,438	0.0%	0	0.0%	0	0.0%	0	4.2%	208,438
Inerts and Other	**25.1%**	**1,000,711**	**1.6%**	**10,908**	**0.0%**	**0**	**16.4%**	**14,990**	**20.8%**	**1,026,609**
Concrete	2.0%	79,783	0.0%	0	0.0%	0	0.0%	0	1.6%	79,783
Asphalt Paving	1.0%	40,743	0.0%	0	0.0%	0	0.0%	0	0.8%	40,743
Asphalt Roofing	1.1%	43,328	0.0%	0	0.0%	0	0.0%	0	0.9%	43,328
Clean Dimensional Lumber	1.0%	40,020	0.0%	0	0.0%	0	0.4%	329	0.8%	40,349
Clean Engineered Wood	1.9%	74,531	0.0%	0	0.0%	0	0.0%	0	1.5%	74,531
Clean Pallets & Crates	8.3%	332,687	1.6%	10,908	0.0%	0	14.3%	13,110	7.2%	356,706
Other Wood Waste	3.1%	124,307	0.0%	0	0.0%	0	0.0%	0	2.5%	124,307
Gypsum Board	0.6%	25,730	0.0%	0	0.0%	0	0.7%	642	0.5%	26,372
Rock, Soil and Fines	2.2%	89,652	0.0%	0	0.0%	0	1.0%	908	1.8%	90,560
Remainder/Composite Inerts and Other	3.8%	149,929	0.0%	0	0.0%	0	0.0%	0	3.0%	149,929
Household Hazardous Waste	**0.2%**	**7,437**	**0.0%**	**16**	**0.0%**	**14**	**1.8%**	**1,605**	**0.2%**	**9,071**
Paint	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	174	0.0%	0	0.0%	0	0.0%	0	0.0%	174
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	866	0.0%	0	0.0%	14	1.7%	1,570	0.0%	2,450
Remainder/Composite Household Hazardous	0.2%	6,397	0.0%	16	0.0%	0	0.0%	35	0.1%	6,447
Special Waste	**1.8%**	**71,286**	**0.0%**	**0**	**0.0%**	**0**	**0.4%**	**371**	**1.4%**	**71,656**
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	174	0.0%	0	0.0%	0	0.0%	0	0.0%	174
Bulky Items	1.8%	70,937	0.0%	0	0.0%	0	0.4%	371	1.4%	71,308
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	174	0.0%	0	0.0%	0	0.0%	0	0.0%	174
Mixed Residue	**0.1%**	**4,898**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.1%**	**4,898**
Totals	**100.0%**	**3,994,643**	**100.0%**	**683,626**	**100.0%**	**174,842**	**100.0%**	**91,402**	**100.0%**	**4,944,512**
Streams Sampled	53		36		3		63		**155**	
TPEPY	1.86		0.32		0.08		0.04		**2.31**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Services – Repair & Personal

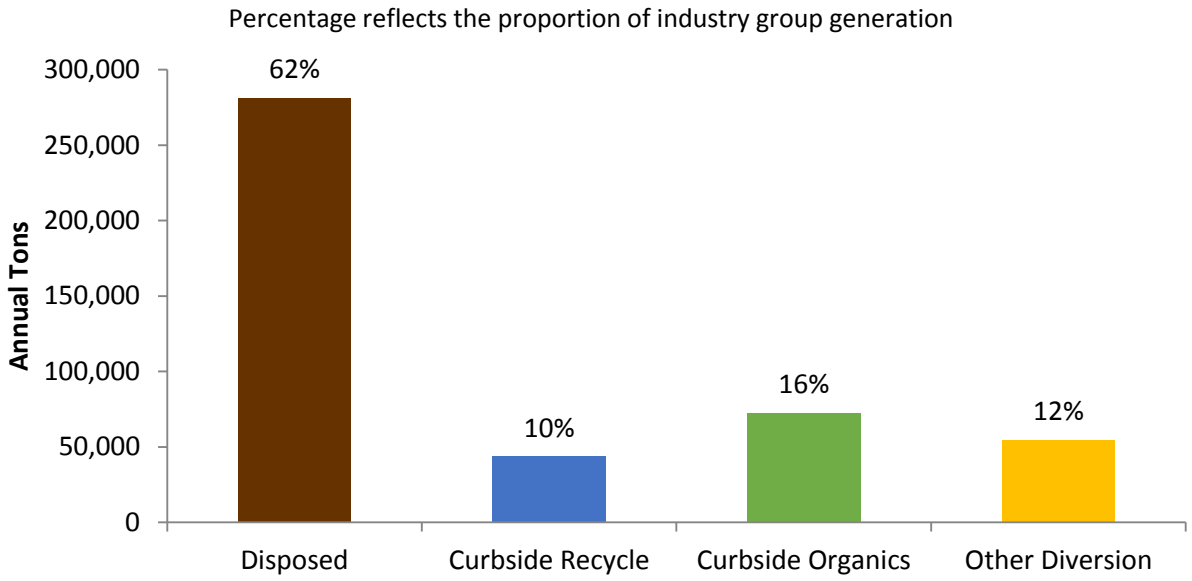
Table 67 presents key findings for the Services – Repair & Personal industry group (Group 15). Statewide, Group 15 disposed of more than 281,000 tons and diverted nearly 171,000 tons. Generation was approximately 1.50 TPEPY. *Remainder/composite paper – compostable* was the most prevalent divertible material type in the Group 15 Disposed stream, accounting for 9 percent of disposal. Combined, *other ferrous* and *other non-ferrous* accounted for nearly three-quarters of the Group 15 Other Diversion stream.

Table 67. Key Findings and Metrics: Services – Repair & Personal

Services - Repair & Personal				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.94	0.57	281,371	170,866	38%
Top Three Diversion Opportunities in Disposed Stream				
• Remainder/Composite Paper - Compostable (9%, 24,506 tons) • Food (7%, 20,927 tons) • Uncoated Corrugated Cardboard (5%, 15,017 tons)				

As shown in Figure 53, the three diversion streams accounted for approximately 38 percent of total generation in Group 15, with the remaining 62 percent in the Disposed stream. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins.

Figure 53. Annual Tons by Waste Stream: Services – Repair & Personal



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 54 breaks down the potential recoverability (by recoverability group) for each stream in Group 15. As shown, almost two-thirds of the Disposed stream was divertible, nearly evenly split between **Curbside Recyclable**, **Compost/Mulch**, and **Other Recyclable** materials.

The Group 15 Curbside Recycle contamination rate was 18 percent. No contamination was observed in the Curbside Organics stream.

Figure 54. Recoverability by Stream: Services – Repair & Personal

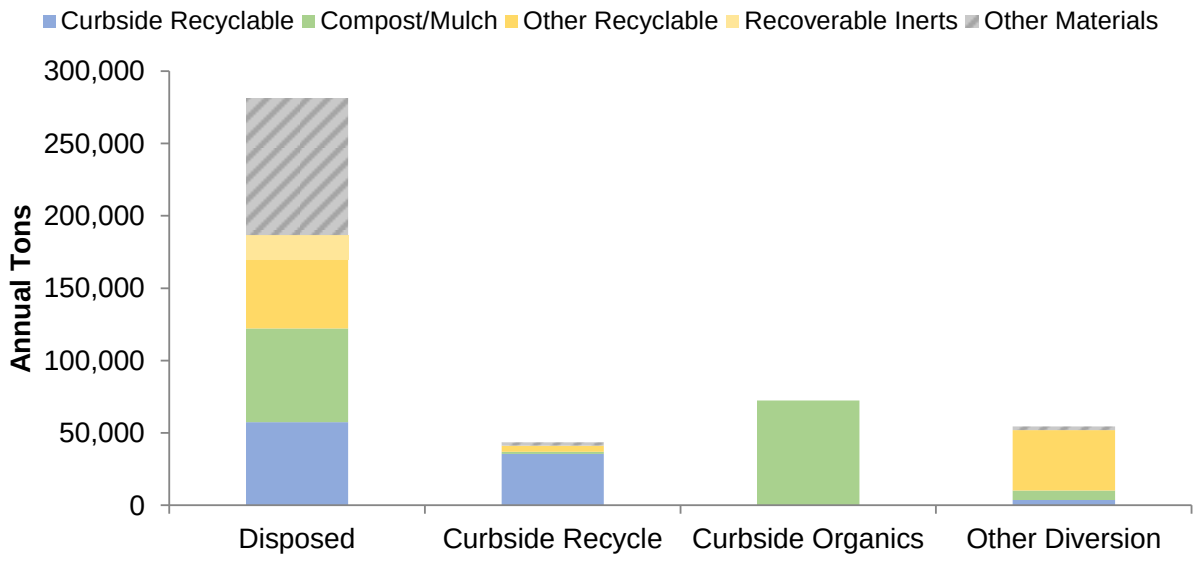


Figure 55 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 55 illustrates, approximately 32 percent of total generation in Group 15 was material in the **Compost/Mulch** recoverability group. The **Curbside Recyclable, Other Recyclable**, and **Other Materials** groups each accounted for slightly more than 20 percent of total generation. When combined, divertible materials accounted for roughly 78 percent of the Group 15 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 55. Recoverability of Materials Generated in the Services – Repair & Personal Sector

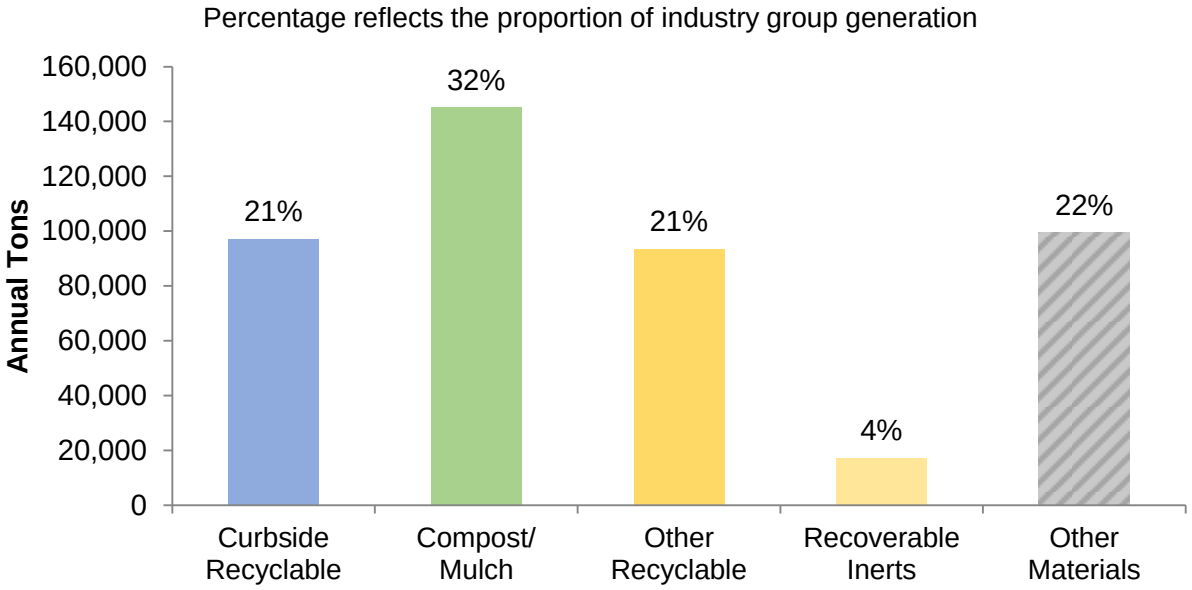


Table 68 presents detailed composition results for each stream in Group 15, as well as for the total group generation.

Table 68. Composition Summary: Services – Repair & Personal

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**30.2%**	**84,886**	**77.2%**	**33,684**	**5.0%**	**3,626**	**6.1%**	**3,334**	**27.8%**	**125,530**
Uncoated Corrugated Cardboard	5.3%	15,017	65.1%	28,403	0.0%	0	6.1%	3,319	10.3%	46,738
Paper Bags	0.3%	889	0.8%	330	0.0%	0	0.0%	0	0.3%	1,219
Newspaper	2.6%	7,218	1.4%	621	0.0%	0	0.0%	0	1.7%	7,839
White Ledger Paper	1.3%	3,776	2.2%	961	0.0%	0	0.0%	0	1.0%	4,736
Other Office Paper	1.5%	4,294	0.2%	74	0.0%	0	0.0%	1	1.0%	4,368
Magazines and Catalogs	0.6%	1,601	0.6%	278	0.0%	0	0.0%	0	0.4%	1,879
Phone Books and Directories	0.0%	31	0.0%	0	0.0%	0	0.0%	0	0.0%	31
Other Miscellaneous Paper - Compostable	0.2%	460	2.3%	1,009	5.0%	3,626	0.0%	0	1.1%	5,096
Other Miscellaneous Paper - Other	3.9%	11,048	2.2%	955	0.0%	0	0.0%	0	2.7%	12,003
Remainder/Composite Paper - Compostable	8.7%	24,506	0.6%	278	0.0%	0	0.0%	0	5.5%	24,784
Remainder/Composite Paper - Other	5.7%	16,046	1.8%	776	0.0%	0	0.0%	13	3.7%	16,836
Glass	**2.7%**	**7,588**	**5.7%**	**2,471**	**0.0%**	**0**	**0.1%**	**68**	**2.2%**	**10,126**
Clear Glass Bottles and Containers	0.6%	1,755	1.2%	534	0.0%	0	0.1%	68	0.5%	2,357
Green Glass Bottles and Containers	0.6%	1,563	3.4%	1,469	0.0%	0	0.0%	0	0.7%	3,032
Brown Glass Bottles and Containers	0.1%	262	1.1%	467	0.0%	0	0.0%	0	0.2%	729
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Flat Glass	0.7%	2,099	0.0%	0	0.0%	0	0.0%	0	0.5%	2,099
Remainder/Composite Glass	0.7%	1,910	0.0%	0	0.0%	0	0.0%	0	0.4%	1,910
Metal	**8.5%**	**24,054**	**3.9%**	**1,708**	**0.0%**	**0**	**78.6%**	**43,009**	**15.2%**	**68,771**
Tin/Steel Cans	0.6%	1,788	0.0%	0	0.0%	0	0.0%	0	0.4%	1,788
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.2%	495	0.0%	0	0.0%	0	0.0%	0	0.1%	495
Other Ferrous	3.3%	9,160	3.8%	1,645	0.0%	0	43.6%	23,840	7.7%	34,644
Aluminum Cans	0.1%	413	0.1%	49	0.0%	0	0.1%	51	0.1%	513
Other Non-Ferrous	2.5%	6,897	0.0%	0	0.0%	0	31.1%	17,017	5.3%	23,914
Remainder/Composite Metal	1.9%	5,301	0.0%	14	0.0%	0	3.8%	2,102	1.6%	7,417
Electronics	**0.7%**	**1,916**	**0.0%**	**0**	**0.0%**	**0**	**0.2%**	**97**	**0.4%**	**2,013**
Brown Goods	0.0%	139	0.0%	0	0.0%	0	0.0%	0	0.0%	139
Computer-related Electronics	0.0%	117	0.0%	0	0.0%	0	0.1%	57	0.0%	174
Other Small Consumer Electronics	0.0%	64	0.0%	0	0.0%	0	0.0%	0	0.0%	64
Video Display Devices	0.6%	1,595	0.0%	0	0.0%	0	0.1%	40	0.4%	1,635
Plastic	**15.3%**	**43,111**	**10.6%**	**4,605**	**0.0%**	**0**	**1.8%**	**1,005**	**10.8%**	**48,720**
PETE Plastic Containers	0.7%	1,890	0.1%	38	0.0%	0	0.8%	423	0.5%	2,351
HDPE Plastic Containers	1.9%	5,427	2.9%	1,279	0.0%	0	0.0%	12	1.5%	6,718
Miscellaneous Plastic Containers	0.2%	681	0.3%	115	0.0%	0	0.0%	0	0.2%	796
Plastic Trash Bags	1.1%	3,031	0.1%	45	0.0%	0	0.0%	0	0.7%	3,077
Plastic Grocery and Other Merchandise Bags	0.3%	758	0.4%	155	0.0%	0	0.0%	0	0.2%	914
Non-Bag Commercial and Industrial Packaging Film	1.2%	3,343	0.3%	144	0.0%	0	0.0%	0	0.8%	3,487
Film Products	0.0%	0	0.1%	41	0.0%	0	0.0%	0	0.0%	41
Other Film - Other	2.0%	5,572	0.0%	20	0.0%	0	0.0%	0	1.2%	5,593
Durable Plastic Items - #2 and #5 Bulky Rigids	0.7%	1,921	4.8%	2,078	0.0%	0	0.0%	0	0.9%	3,999
Durable Plastic Items - Other	2.7%	7,617	0.8%	335	0.0%	0	0.0%	0	1.8%	7,952
Remainder/Composite Plastic	4.6%	12,870	0.8%	353	0.0%	0	1.0%	569	3.0%	13,792
Other Organic	**21.5%**	**60,389**	**0.9%**	**414**	**95.0%**	**68,901**	**1.4%**	**792**	**28.9%**	**130,497**
Food	7.4%	20,927	0.2%	91	95.0%	68,901	0.0%	0	19.9%	89,919
Leaves and Grass	3.4%	9,554	0.0%	0	0.0%	0	0.0%	0	2.1%	9,554
Prunings and Trimmings	0.6%	1,705	0.0%	0	0.0%	0	0.0%	0	0.4%	1,705
Branches and Stumps	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Manures	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	4.0%	11,271	0.2%	83	0.0%	0	1.4%	790	2.7%	12,145
Carpet	0.8%	2,272	0.0%	0	0.0%	0	0.0%	0	0.5%	2,272
Remainder/Composite Organic	5.2%	14,659	0.6%	240	0.0%	0	0.0%	2	3.3%	14,901
Inerts and Other	**16.0%**	**45,147**	**1.3%**	**563**	**0.0%**	**0**	**11.7%**	**6,400**	**11.5%**	**52,111**
Concrete	0.2%	511	0.0%	0	0.0%	0	0.0%	0	0.1%	511
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	2.3%	6,552	0.0%	0	0.0%	0	0.0%	0	1.4%	6,552
Clean Dimensional Lumber	0.5%	1,481	0.4%	173	0.0%	0	0.0%	0	0.4%	1,654
Clean Engineered Wood	0.7%	2,028	0.0%	0	0.0%	0	0.0%	0	0.4%	2,028
Clean Pallets & Crates	1.4%	3,947	0.0%	0	0.0%	0	11.7%	6,382	2.3%	10,328
Other Wood Waste	4.9%	13,928	0.0%	0	0.0%	0	0.0%	19	3.1%	13,947
Gypsum Board	1.5%	4,319	0.0%	0	0.0%	0	0.0%	0	1.0%	4,319
Rock, Soil and Fines	2.0%	5,719	0.0%	0	0.0%	0	0.0%	0	1.3%	5,719
Remainder/Composite Inerts and Other	2.4%	6,663	0.9%	390	0.0%	0	0.0%	0	1.6%	7,053
Household Hazardous Waste	**2.5%**	**7,008**	**0.4%**	**188**	**0.0%**	**0**	**0.0%**	**0**	**1.6%**	**7,196**
Paint	1.4%	3,899	0.0%	0	0.0%	0	0.0%	0	0.9%	3,899
Vehicle and Equipment Fluids	1.1%	3,064	0.0%	0	0.0%	0	0.0%	0	0.7%	3,064
Used Oil	0.0%	18	0.0%	0	0.0%	0	0.0%	0	0.0%	18
Batteries	0.0%	13	0.4%	188	0.0%	0	0.0%	0	0.0%	201
Remainder/Composite Household Hazardous	0.0%	14	0.0%	0	0.0%	0	0.0%	0	0.0%	14
Special Waste	**2.2%**	**6,061**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**1.3%**	**6,061**
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	1.2%	3,455	0.0%	0	0.0%	0	0.0%	0	0.8%	3,455
Tires	0.9%	2,605	0.0%	0	0.0%	0	0.0%	0	0.6%	2,605
Remainder/Composite Special Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Mixed Residue	**0.4%**	**1,212**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.3%**	**1,212**
Totals	**100.0%**	**281,371**	**100.0%**	**43,633**	**100.0%**	**72,528**	**100.0%**	**54,706**	**100.0%**	**452,237**
Streams Sampled	52		13		1		36		**102**	
TPEPY	0.94		0.15		0.24		0.18		**1.50**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Not Elsewhere Classified

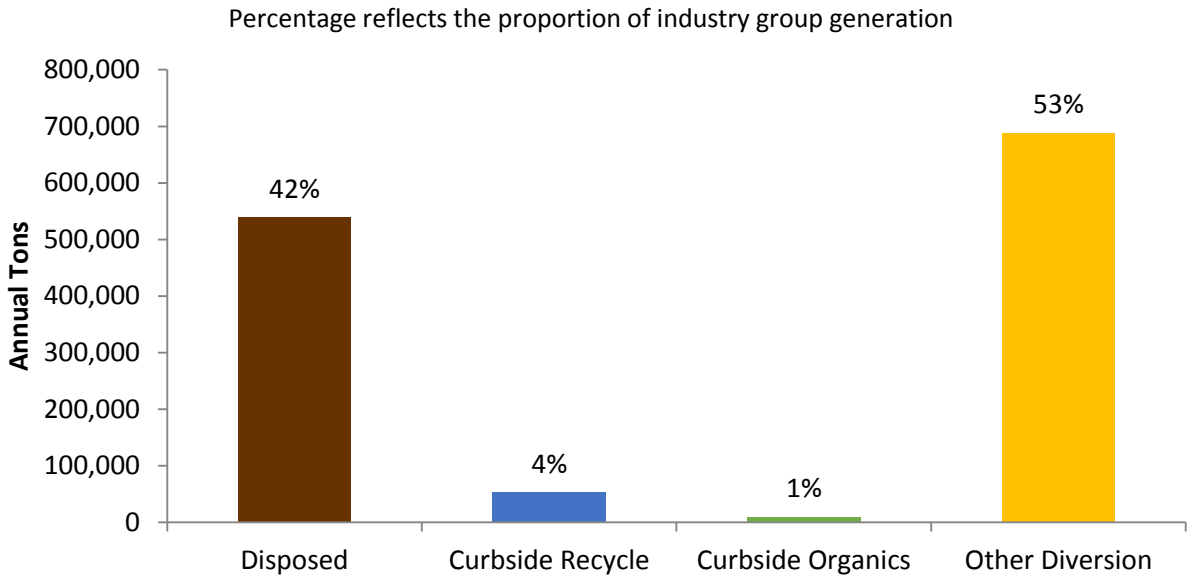
Table 69 presents key findings for the Not Elsewhere Classified industry group (Group 16). This group consists of industries with less employment or atypical waste streams that may be less likelihood to be targeted for diversion programs, such as agriculture, utilities, and transportation. Statewide, Group 16 disposed of nearly 539,000 tons and diverted more than 750,000 tons. Generation was approximately 1.20 TPEPY. *Food* was the most prevalent divertible material type in the Group 16 Disposed stream, accounting for 16 percent of disposal.

Table 69. Key Findings and Metrics: Not Elsewhere Classified

Not Elsewhere Classified				
Key Findings and Metrics				
Disposed TPEPY	Diverted TPEPY	Disposed Tons	Diverted Tons	Diversion Rate
0.50	0.70	538,858	750,291	58%
Top Three Diversion Opportunities in Disposed Stream				
• Food (16%, 86,197 tons) • Remainder/Composite Paper - Compostable (9%, 48,398 tons) • Leaves and Grass (6%, 30,678 tons)				

Figure 56 presents the annual tons for each stream in Group 16. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins, and materials diverted through other means, such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. Other Diversion was the largest stream (53 percent), and the Disposed stream accounted for an additional 42 percent of Group 16 generation.

Figure 56. Annual Tons by Waste Stream: Not Elsewhere Classified



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 57 breaks down the potential recoverability (by recoverability group) for each stream in Group 16. As shown, the Other Diversion stream was approximately 81 percent **Compost/Mulch**, and nearly three-quarters of the Disposed stream was divertible.

The Group 16 Curbside Recycle contamination rate was 13 percent. No contamination was observed in the Curbside Organics stream.

Figure 57. Recoverability by Stream: Not Elsewhere Classified

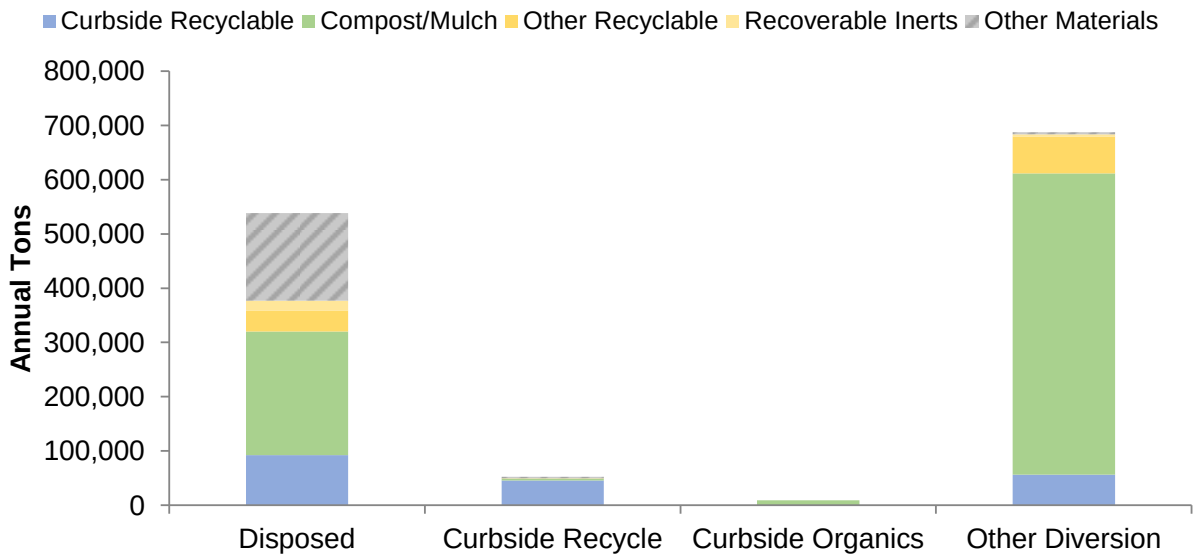


Figure 58 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 58 illustrates, approximately 62 percent of total generation in Group 16 was material in the **Compost/Mulch** recoverability group, and approximately 15 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 87 percent of the Group 16 generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 58. Recoverability of Materials Generated in the Not Elsewhere Classified Sector

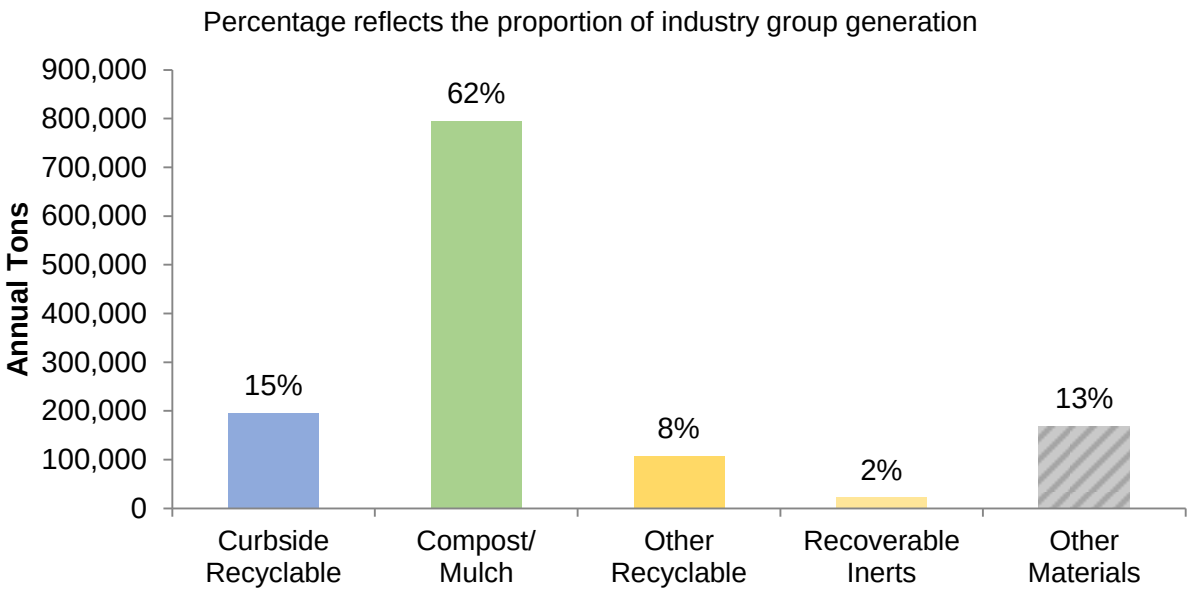


Table 70 presents detailed composition results for each stream in Group 16, as well as for the total group generation.

Table 70. Composition Summary: Not Elsewhere Classified

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**27.6%**	**148,662**	**74.3%**	**39,479**	**2.1%**	**196**	**8.2%**	**56,148**	**19.0%**	**244,485**
Uncoated Corrugated Cardboard	4.5%	24,092	62.5%	33,188	0.0%	0	8.1%	55,416	8.7%	112,695
Paper Bags	0.3%	1,659	0.4%	212	0.0%	4	0.0%	0	0.1%	1,874
Newspaper	1.2%	6,355	0.7%	375	0.0%	0	0.0%	0	0.5%	6,730
White Ledger Paper	1.9%	10,098	2.0%	1,071	0.0%	0	0.0%	0	0.9%	11,170
Other Office Paper	1.8%	9,942	4.4%	2,345	0.0%	2	0.0%	3	1.0%	12,292
Magazines and Catalogs	1.9%	10,499	1.2%	621	0.0%	0	0.0%	0	0.9%	11,120
Phone Books and Directories	0.1%	325	0.1%	79	0.0%	0	0.0%	0	0.0%	404
Other Miscellaneous Paper - Compostable	0.2%	1,164	0.7%	383	1.9%	180	0.0%	0	0.1%	1,726
Other Miscellaneous Paper - Other	3.3%	17,840	1.3%	693	0.1%	11	0.1%	729	1.5%	19,273
Remainder/Composite Paper - Compostable	9.0%	48,398	0.2%	99	0.0%	0	0.0%	0	3.8%	48,498
Remainder/Composite Paper - Other	3.4%	18,292	0.8%	413	0.0%	0	0.0%	0	1.5%	18,705
Glass	**4.8%**	**26,005**	**10.9%**	**5,771**	**0.0%**	**0**	**0.0%**	**0**	**2.5%**	**31,776**
Clear Glass Bottles and Containers	0.5%	2,695	3.4%	1,795	0.0%	0	0.0%	0	0.3%	4,490
Green Glass Bottles and Containers	0.1%	451	3.9%	2,087	0.0%	0	0.0%	0	0.2%	2,538
Brown Glass Bottles and Containers	0.3%	1,816	3.6%	1,889	0.0%	0	0.0%	0	0.3%	3,705
Other Glass Colored Bottles and Containers	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Flat Glass	2.2%	11,778	0.0%	0	0.0%	0	0.0%	0	0.9%	11,778
Remainder/Composite Glass	1.7%	9,265	0.0%	0	0.0%	0	0.0%	0	0.7%	9,265
Metal	**2.9%**	**15,689**	**1.1%**	**563**	**0.0%**	**0**	**9.7%**	**66,765**	**6.4%**	**83,016**
Tin/Steel Cans	0.2%	917	0.4%	237	0.0%	0	0.0%	0	0.1%	1,154
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	57	0.0%	0	0.0%	0	0.0%	0	0.0%	57
Other Ferrous	1.2%	6,287	0.1%	51	0.0%	0	8.1%	56,028	4.8%	62,366
Aluminum Cans	0.2%	967	0.5%	258	0.0%	0	0.0%	296	0.1%	1,521
Other Non-Ferrous	0.6%	3,201	0.0%	16	0.0%	0	1.5%	10,406	1.1%	13,623
Remainder/Composite Metal	0.8%	4,260	0.0%	0	0.0%	0	0.0%	34	0.3%	4,295
Electronics	**0.2%**	**1,241**	**0.0%**	**0**	**0.0%**	**0**	**0.2%**	**1,277**	**0.2%**	**2,518**
Brown Goods	0.0%	0	0.0%	0	0.0%	0	0.0%	5	0.0%	5
Computer-related Electronics	0.0%	0	0.0%	0	0.0%	0	0.0%	246	0.0%	246
Other Small Consumer Electronics	0.0%	0	0.0%	0	0.0%	0	0.0%	111	0.0%	111
Video Display Devices	0.2%	1,241	0.0%	0	0.0%	0	0.1%	916	0.2%	2,157
Plastic	**12.4%**	**67,071**	**7.1%**	**3,756**	**0.0%**	**0**	**0.0%**	**323**	**5.5%**	**71,150**
PETE Plastic Containers	0.4%	2,326	1.1%	574	0.0%	0	0.0%	314	0.2%	3,214
HDPE Plastic Containers	0.3%	1,725	0.6%	320	0.0%	0	0.0%	10	0.2%	2,055
Miscellaneous Plastic Containers	0.2%	1,021	0.5%	292	0.0%	0	0.0%	0	0.1%	1,313
Plastic Trash Bags	2.0%	10,756	0.5%	276	0.0%	0	0.0%	0	0.9%	11,032
Plastic Grocery and Other Merchandise Bags	0.2%	1,291	0.1%	28	0.0%	0	0.0%	0	0.1%	1,319
Non-Bag Commercial and Industrial Packaging Film	1.8%	9,482	0.0%	3	0.0%	0	0.0%	0	0.7%	9,485
Film Products	0.0%	0	1.8%	942	0.0%	0	0.0%	0	0.1%	942
Other Film - Other	1.7%	9,331	1.5%	822	0.0%	0	0.0%	0	0.8%	10,153
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	630	0.2%	84	0.0%	0	0.0%	0	0.1%	714
Durable Plastic Items - Other	1.8%	9,740	0.0%	1	0.0%	0	0.0%	0	0.8%	9,740
Remainder/Composite Plastic	3.9%	20,768	0.8%	415	0.0%	0	0.0%	0	1.6%	21,183
Other Organic	**38.3%**	**206,450**	**5.9%**	**3,136**	**97.9%**	**9,234**	**75.7%**	**520,967**	**57.4%**	**739,787**
Food	16.0%	86,197	5.2%	2,758	1.2%	109	31.1%	214,139	23.5%	303,202
Leaves and Grass	5.7%	30,678	0.0%	0	48.4%	4,563	15.9%	109,124	11.2%	144,365
Prunings and Trimmings	5.0%	26,986	0.0%	0	48.4%	4,563	28.7%	197,704	17.8%	229,252
Branches and Stumps	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Manures	0.4%	2,117	0.0%	0	0.0%	0	0.0%	0	0.2%	2,117
Textiles	2.8%	15,017	0.2%	80	0.0%	0	0.0%	0	1.2%	15,097
Carpet	0.3%	1,415	0.0%	0	0.0%	0	0.0%	0	0.1%	1,415
Remainder/Composite Organic	8.2%	44,040	0.6%	299	0.0%	0	0.0%	0	3.4%	44,340
Inerts and Other	**11.5%**	**62,169**	**0.0%**	**0**	**0.0%**	**0**	**6.1%**	**42,166**	**8.1%**	**104,335**
Concrete	1.1%	5,942	0.0%	0	0.0%	0	0.0%	0	0.5%	5,942
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Asphalt Roofing	0.0%	147	0.0%	0	0.0%	0	0.0%	0	0.0%	147
Clean Dimensional Lumber	0.7%	3,569	0.0%	0	0.0%	0	0.0%	0	0.3%	3,569
Clean Engineered Wood	1.1%	6,070	0.0%	0	0.0%	0	4.2%	28,927	2.7%	34,997
Clean Pallets & Crates	4.2%	22,650	0.0%	0	0.0%	0	0.8%	5,235	2.2%	27,885
Other Wood Waste	1.5%	7,936	0.0%	0	0.0%	0	0.0%	0	0.6%	7,936
Gypsum Board	0.0%	46	0.0%	0	0.0%	0	0.0%	0	0.0%	46
Rock, Soil and Fines	2.2%	12,012	0.0%	0	0.0%	0	0.6%	4,118	1.3%	16,130
Remainder/Composite Inerts and Other	0.7%	3,796	0.0%	0	0.0%	0	0.6%	3,886	0.6%	7,682
Household Hazardous Waste	**0.0%**	**66**	**0.8%**	**404**	**0.0%**	**0**	**0.0%**	**106**	**0.0%**	**576**
Paint	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil	0.0%	25	0.8%	404	0.0%	0	0.0%	0	0.0%	430
Batteries	0.0%	37	0.0%	0	0.0%	0	0.0%	106	0.0%	143
Remainder/Composite Household Hazardous	0.0%	4	0.0%	0	0.0%	0	0.0%	0	0.0%	4
Special Waste	**1.4%**	**7,339**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.6%**	**7,339**
Ash	0.0%	95	0.0%	0	0.0%	0	0.0%	0	0.0%	95
Treated Medical Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Bulky Items	1.3%	7,157	0.0%	0	0.0%	0	0.0%	0	0.6%	7,157
Tires	0.0%	88	0.0%	0	0.0%	0	0.0%	0	0.0%	88
Remainder/Composite Special Waste	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Mixed Residue	**0.8%**	**4,166**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.3%**	**4,166**
Totals	**100.0%**	**538,858**	**100.0%**	**53,109**	**100.0%**	**9,430**	**100.0%**	**687,752**	**100.0%**	**1,289,149**
Streams Sampled	53		24		2		49		**128**	
TPEPY	0.50		0.05		0.01		0.64		**1.20**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Findings for Multi-Family

Table 71 presents key findings for the Multi-Family group. Statewide, Multi-Family disposed of more than 2.5 million tons and diverted approximately 460,000 tons. The Multi-Family generation rate was approximately 0.87 tons per unit per year (TPUPY). *Food* was the most prevalent divertible material type in the Multi-Family Disposed stream, accounting for 25 percent of disposal.

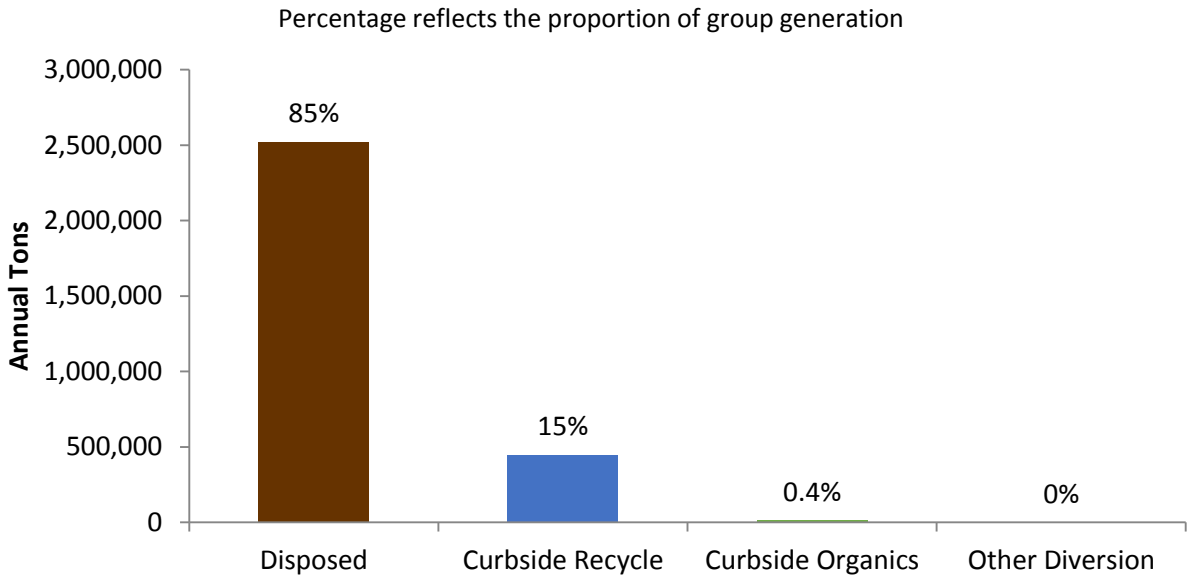
Multi-Family estimates did not take into account any diversion (e.g., recycling of computer equipment, furniture, etc.) done by tenants of the multi-family complex independently of the buildings' management and custodial services.

Table 71. Key Findings and Metrics: Multi-Family

Multifamily				
Key Findings and Metrics				
Disposed TPUPY	Diverted TPUPY	Disposed Tons	Diverted Tons	Diversion Rate
0.74	0.13	2,524,183	460,083	15%
Top Three Diversion Opportunities in Disposed Stream				
• Food (25%, 625,274 tons) • Textiles (7%, 188,044 tons) • Remainder/Composite Paper - Compostable (7%, 170,875 tons)				

Figure 59 presents the annual tons generated by each stream in Multi-Family. This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, curbside organics bins, and materials diverted through other means such as businesses selling their own cardboard or scrap metal directly to recyclers. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately 85 percent of total generation in Multi-Family went to the Disposed stream.

Figure 59. Annual Tons by Waste Stream: Multi-Family



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. Table 95 in Appendix B: Material Definitions details the assignment of material types to recoverability groups. Figure 60 breaks down the potential recoverability (by recoverability group) for each stream in Multi-Family. As shown, nearly three-quarters of the Disposed stream was divertible.

The Multi-Family Curbside Recycle contamination rate was 27 percent, and the Curbside Organics contamination rate was less than 1 percent.

Figure 60. Recoverability by Stream: Multi-Family

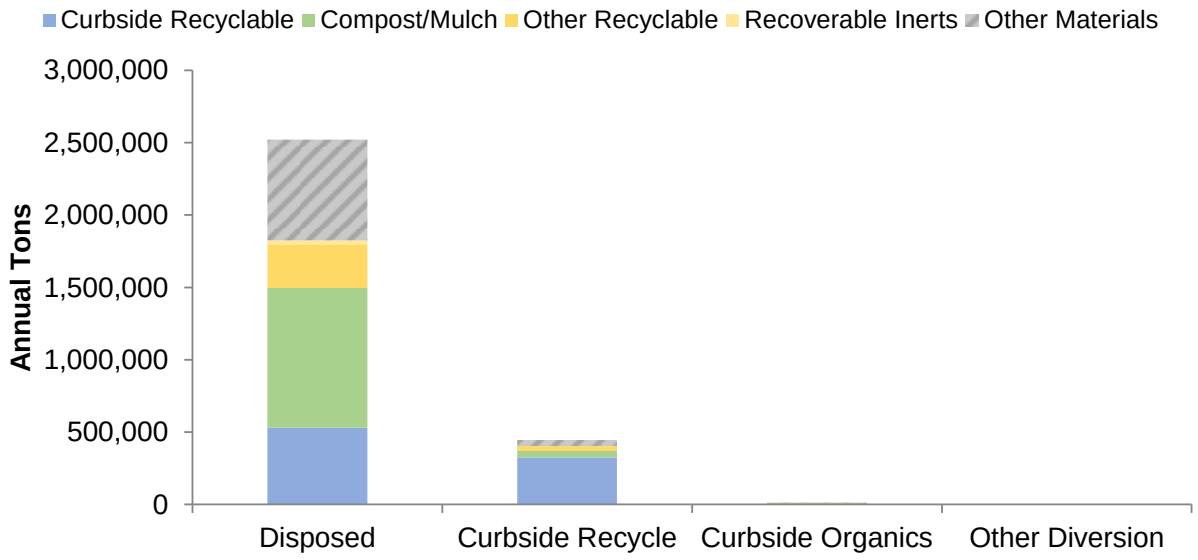


Figure 61 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream; i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 61 illustrates, approximately 34 percent of total generation in Multi-Family was material in the **Compost/Mulch** recoverability group, and approximately 29 percent was **Curbside Recyclable**. When combined, divertible materials accounted for roughly 75 percent of the Multi-Family generation. Table 95 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups.

Figure 61. Recoverability of Materials Generated in the Multi-Family Sector

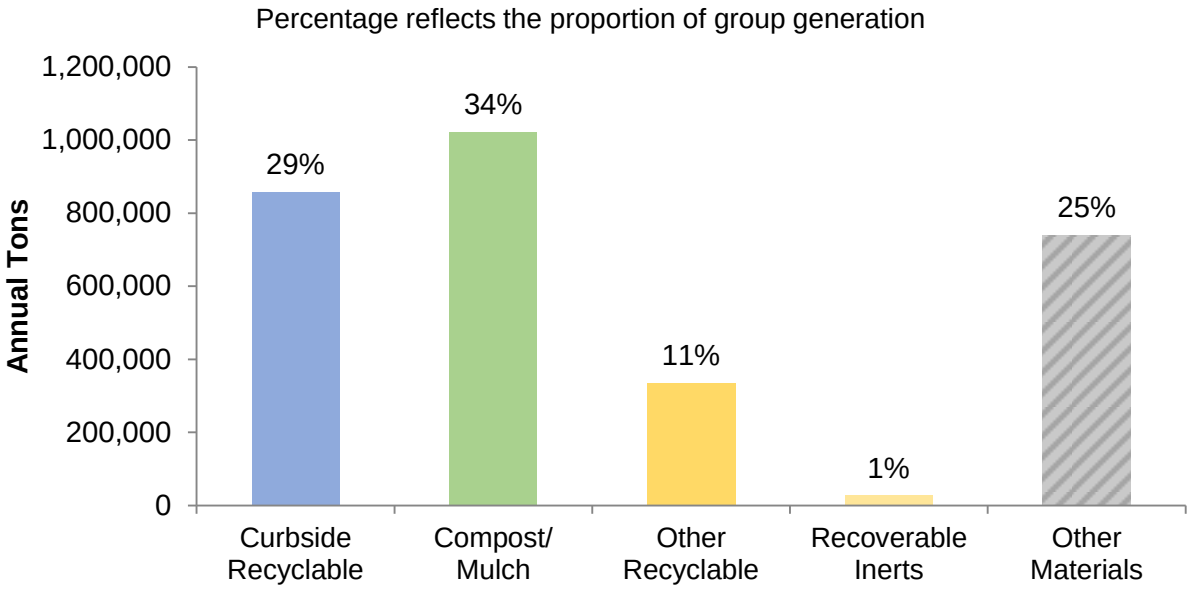


Table 72 presents detailed composition results for each stream in Multi-Family, as well as for the total group generation.

Table 72. Composition Summary: Multi-Family

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**23.5%**	**593,459**	**55.3%**	**247,356**	**1.9%**	**230**	**-**	**-**	**28.2%**	**841,045**
Uncoated Corrugated Cardboard	3.6%	90,061	19.2%	86,143	0.0%	0	-	-	5.9%	176,204
Paper Bags	0.5%	13,314	0.9%	4,174	0.0%	0	-	-	0.6%	17,489
Newspaper	4.6%	117,201	19.2%	85,821	0.0%	0	-	-	6.8%	203,022
White Ledger Paper	0.5%	13,345	2.0%	9,148	0.0%	0	-	-	0.8%	22,493
Other Office Paper	0.6%	14,862	2.8%	12,396	0.0%	0	-	-	0.9%	27,258
Magazines and Catalogs	0.7%	18,876	2.1%	9,284	0.0%	0	-	-	0.9%	28,160
Phone Books and Directories	0.0%	773	0.4%	1,636	0.0%	0	-	-	0.1%	2,409
Other Miscellaneous Paper - Compostable	0.3%	7,471	1.5%	6,552	1.9%	230	-	-	0.5%	14,253
Other Miscellaneous Paper - Other	4.7%	119,119	4.3%	19,457	0.0%	0	-	-	4.6%	138,575
Remainder/Composite Paper - Compostable	6.8%	170,875	0.4%	1,902	0.0%	0	-	-	5.8%	172,777
Remainder/Composite Paper - Other	1.1%	27,563	2.4%	10,845	0.0%	0	-	-	1.3%	38,407
Glass	**3.0%**	**75,495**	**11.3%**	**50,539**	**0.0%**	**0**	**-**	**-**	**4.2%**	**126,033**
Clear Glass Bottles and Containers	1.6%	41,446	4.5%	20,134	0.0%	0	-	-	2.1%	61,580
Green Glass Bottles and Containers	0.1%	3,756	4.2%	18,663	0.0%	0	-	-	0.8%	22,419
Brown Glass Bottles and Containers	0.7%	17,218	2.6%	11,697	0.0%	0	-	-	1.0%	28,915
Other Glass Colored Bottles and Containers	0.1%	1,563	0.0%	44	0.0%	0	-	-	0.1%	1,607
Flat Glass	0.1%	1,464	0.0%	0	0.0%	0	-	-	0.0%	1,464
Remainder/Composite Glass	0.4%	10,049	0.0%	0	0.0%	0	-	-	0.3%	10,049
Metal	**3.5%**	**89,255**	**3.6%**	**16,197**	**0.0%**	**0**	**-**	**-**	**3.5%**	**105,452**
Tin/Steel Cans	0.9%	23,463	1.5%	6,769	0.0%	0	-	-	1.0%	30,232
Major Appliances	0.0%	28	0.0%	0	0.0%	0	-	-	0.0%	28
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	-	-	0.0%	0
Other Ferrous	0.8%	19,097	1.4%	6,065	0.0%	0	-	-	0.8%	25,162
Aluminum Cans	0.2%	5,749	0.5%	2,315	0.0%	0	-	-	0.3%	8,064
Other Non-Ferrous	0.8%	19,404	0.1%	543	0.0%	0	-	-	0.7%	19,947
Remainder/Composite Metal	0.9%	21,516	0.1%	505	0.0%	0	-	-	0.7%	22,021
Electronics	**1.6%**	**39,631**	**1.2%**	**5,246**	**0.0%**	**0**	**-**	**-**	**1.5%**	**44,878**
Brown Goods	0.5%	11,446	0.0%	0	0.0%	0	-	-	0.4%	11,446
Computer-related Electronics	0.2%	5,091	0.1%	445	0.0%	0	-	-	0.2%	5,537
Other Small Consumer Electronics	0.3%	6,605	0.3%	1,468	0.0%	0	-	-	0.3%	8,073
Video Display Devices	0.7%	16,489	0.7%	3,333	0.0%	0	-	-	0.7%	19,822
Plastic	**11.0%**	**278,032**	**14.9%**	**66,791**	**0.5%**	**66**	**-**	**-**	**11.6%**	**344,888**
PETE Plastic Containers	0.9%	23,363	5.1%	23,046	0.3%	33	-	-	1.6%	46,442
HDPE Plastic Containers	0.5%	11,770	2.0%	9,079	0.0%	0	-	-	0.7%	20,849
Miscellaneous Plastic Containers	0.6%	16,113	1.7%	7,402	0.0%	0	-	-	0.8%	23,515
Plastic Trash Bags	1.1%	28,449	0.4%	1,887	0.0%	0	-	-	1.0%	30,336
Plastic Grocery and Other Merchandise Bags	0.9%	22,166	0.5%	2,156	0.0%	0	-	-	0.8%	24,322
Non-Bag Commercial and Industrial Packaging Film	0.2%	4,259	0.0%	19	0.0%	0	-	-	0.1%	4,278
Film Products	0.0%	40	0.1%	285	0.0%	0	-	-	0.0%	325
Other Film - Other	2.1%	54,247	1.4%	6,253	0.0%	0	-	-	2.0%	60,501
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	4,237	1.8%	8,163	0.0%	0	-	-	0.4%	12,400
Durable Plastic Items - Other	1.1%	28,424	0.4%	1,906	0.0%	0	-	-	1.0%	30,330
Remainder/Composite Plastic	3.4%	84,962	1.5%	6,595	0.3%	33	-	-	3.1%	91,591
Other Organic	**44.1%**	**1,112,851**	**11.4%**	**51,116**	**97.6%**	**12,121**	**-**	**-**	**39.4%**	**1,176,088**
Food	24.8%	625,274	7.0%	31,201	84.5%	10,489	-	-	22.3%	666,964
Leaves and Grass	3.0%	75,412	0.0%	0	11.6%	1,441	-	-	2.6%	76,853
Prunings and Trimmings	0.8%	19,613	0.0%	0	1.5%	191	-	-	0.7%	19,804
Branches and Stumps	0.0%	0	0.0%	0	0.0%	0	-	-	0.0%	0
Manures	0.0%	0	0.0%	0	0.0%	0	-	-	0.0%	0
Textiles	7.4%	188,044	2.1%	9,440	0.0%	0	-	-	6.6%	197,484
Carpet	0.6%	15,806	0.0%	0	0.0%	0	-	-	0.5%	15,806
Remainder/Composite Organic	7.5%	188,702	2.3%	10,474	0.0%	0	-	-	6.7%	199,176
Inerts and Other	**6.1%**	**153,845**	**1.1%**	**4,828**	**0.0%**	**0**	**-**	**-**	**5.3%**	**158,673**
Concrete	0.4%	9,593	0.0%	0	0.0%	0	-	-	0.3%	9,593
Asphalt Paving	0.0%	0	0.0%	0	0.0%	0	-	-	0.0%	0
Asphalt Roofing	0.0%	0	0.0%	0	0.0%	0	-	-	0.0%	0
Clean Dimensional Lumber	0.5%	13,147	1.0%	4,596	0.0%	0	-	-	0.6%	17,742
Clean Engineered Wood	0.1%	3,328	0.0%	0	0.0%	0	-	-	0.1%	3,328
Clean Pallets & Crates	2.0%	50,259	0.0%	0	0.0%	0	-	-	1.7%	50,259
Other Wood Waste	2.1%	53,274	0.0%	0	0.0%	0	-	-	1.8%	53,274
Gypsum Board	0.4%	10,465	0.0%	19	0.0%	0	-	-	0.4%	10,483
Rock, Soil and Fines	0.3%	7,437	0.0%	0	0.0%	0	-	-	0.2%	7,437
Remainder/Composite Inerts and Other	0.3%	6,342	0.0%	213	0.0%	0	-	-	0.2%	6,556
Household Hazardous Waste	**0.1%**	**2,071**	**0.0%**	**82**	**0.0%**	**0**	**-**	**-**	**0.1%**	**2,153**
Paint	0.0%	10	0.0%	0	0.0%	0	-	-	0.0%	10
Vehicle and Equipment Fluids	0.0%	0	0.0%	0	0.0%	0	-	-	0.0%	0
Used Oil	0.0%	0	0.0%	0	0.0%	0	-	-	0.0%	0
Batteries	0.0%	911	0.0%	38	0.0%	0	-	-	0.0%	950
Remainder/Composite Household Hazardous	0.0%	1,149	0.0%	43	0.0%	0	-	-	0.0%	1,193
Special Waste	**3.7%**	**92,535**	**1.2%**	**5,416**	**0.0%**	**0**	**-**	**-**	**3.3%**	**97,950**
Ash	0.1%	2,351	0.0%	0	0.0%	0	-	-	0.1%	2,351
Treated Medical Waste	0.7%	18,643	0.0%	0	0.0%	0	-	-	0.6%	18,643
Bulky Items	2.8%	71,031	0.9%	4,073	0.0%	0	-	-	2.5%	75,103
Tires	0.0%	0	0.3%	1,343	0.0%	0	-	-	0.0%	1,343
Remainder/Composite Special Waste	0.0%	511	0.0%	0	0.0%	0	-	-	0.0%	511
Mixed Residue	**3.4%**	**87,009**	**0.0%**	**96**	**0.0%**	**0**	**-**	**-**	**2.9%**	**87,105**
Totals	**100.0%**	**2,524,183**	**100.0%**	**447,666**	**100.0%**	**12,417**	**-**	**-**	**100.0%**	**2,984,265**
Streams Sampled	52		42		3		0		**97**	
TPEPY	0.74		0.13		0.00		0.00		**0.87**	

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables

Additional Analyses Results

Task 3 Analysis – Assessment of Commercial Curbside Diversion

In 2012 California's Mandatory Commercial Recycling (MCR) law went into effect, requiring businesses to take actions to divert materials from disposal. Businesses can meet the law by source-separating materials and having them delivered for recycling or composting. They can also meet the law by subscribing to a service that may include mixed-waste processing (i.e. recyclables are not separated and the entire waste stream is processed), as long as the results are comparable to source separation. In order to determine what's comparable to source separation, an assessment of that source separation is needed.

The goal of this task was to gain a better understanding of diversion from curbside source-separation systems for the commercial sector in general.

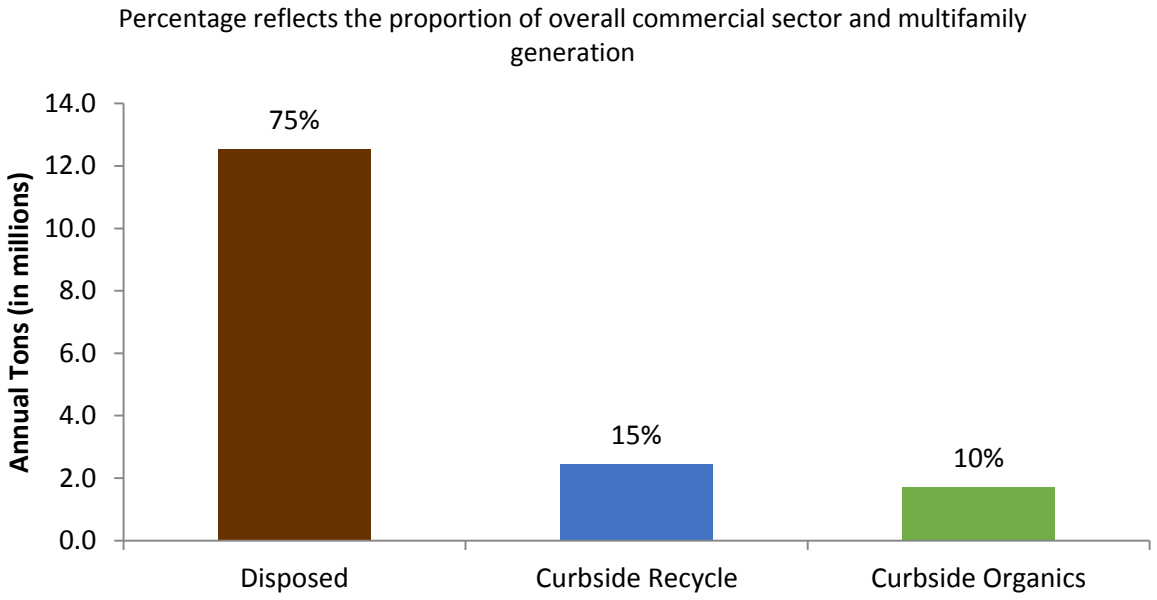
This was done by gathering data on materials placed in recycling and organics bins by businesses that subscribe to these services. This data was then combined with data on materials placed in disposal bins (Task 2 of the project) to get a comprehensive picture of the amounts of recoverable materials flowing to disposal and diversion through bin-based programs.

This data can be used to set a benchmark that mixed-waste processing should meet in order to be "comparable to source separation." Other diversion through non-curbside programs that occurs at businesses can happen whether the business uses recycling bins or mixed-waste processing; therefore, this other diversion stream was not included in the analysis. Only materials placed in bins that would be processed by a "clean" MRF (i.e., processes source-separated materials) or by an organics processing facility were included in this task.

This task assessed curbside diversion for the commercial sector as a whole, not by individual industry group. Since the law includes multi-family sites, this sector was included in the analysis. The Task 3 analysis includes quantity and composition data from only the sites with curbside diversion used in Task 2 (the generator-based disposal study) and Task 4 (the generator-based diversion study). The subset of generator sites included in the Task 3 analysis has different characteristics than the sites selected to participate in Task 4. The main difference is that all Task 3 sites have curbside diversion programs, but some Task 4 sites only have non-curbside diversion programs on-site. The distribution of samples between regions and industry groups in the two tasks is also different.

Figure 62 presents the annual tons generated by each stream for the businesses included in the Task 3 analysis (Task 3 Generators). This figure summarizes the quantity of materials placed in disposal bins, curbside recycling bins, and curbside organics bins. The Curbside Recycle and Curbside Organics quantities include the contamination—materials not typically acceptable in those streams such as food in recycling bins or glass in organics bins. As shown, approximately 75 percent of total generation at Task 3 Generators went to the Disposed stream.

Figure 62. Annual Tons by Waste Stream: Task 3 Generator Sites



Each material stream was composed of many different material types, and each of those material types was assigned to one of the five recoverability groups. This figure, unlike similar figures elsewhere in the report, considers the contamination level when assigning a material to a recovery group. Table 96 in Appendix B: Material Definitions details the assignment of material types to recoverability groups for this figure. Figure 63 breaks down the potential recoverability (by recoverability group) for each stream for Task 3 Generators.

As shown, more than two-thirds of the Disposed stream was divertible. For Task 3 Generators, the Curbside Recycle contamination rate was 25 percent, and the Curbside Organics contamination rate was approximately 1 percent.

Figure 63. Recoverability by Stream: Task 3 Generator Sites

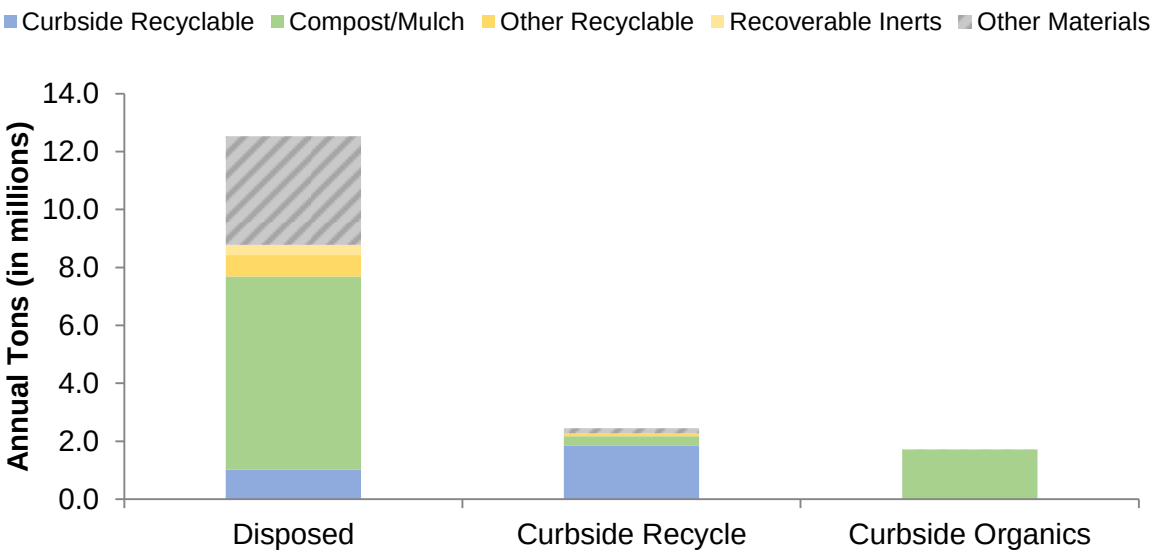
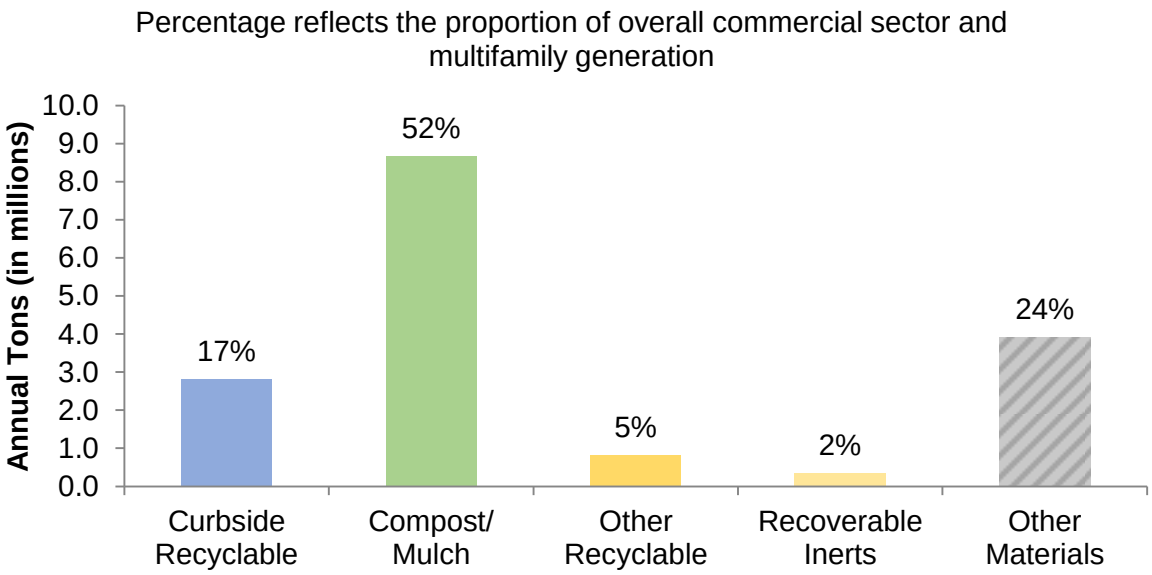


Figure 64 summarizes each recoverability group's proportion of total generation. In this figure, the **Compost/Mulch** quantity is the sum of the **Compost/Mulch** quantities in each stream, i.e., the sum of the green bars in the previous figure equals the green bar in this figure. The same holds true for each of the other recoverability groups. As Figure 64 illustrates, approximately 52 percent of total generation for Task 3 Generators was material in the **Compost/Mulch** recoverability group, and approximately 24 percent was **Other Materials**. When combined, divertible materials accounted for roughly 76 percent of generation for Task 3 Generators. This figure, unlike similar figures elsewhere in the report, considers the contamination level when assigning a material to a recovery group. Table 96 in Appendix B: Material Definitions summarizes the assignment of material types to recoverability groups for this figure.

Figure 64. Recoverability of Materials Generated by Task 3 Generator Sites



As part of the Task 3 analysis, the field crew performed a more detailed sort of the Disposed, Curbside Recycle, and Curbside Organics stream samples obtained from some generators. The purpose of the contamination subsort was to estimate the fraction of the sorted materials that a MRF or organics processor could recover, recognizing that, due to contamination, not all "recoverable" material arriving at a facility is in a condition that permits its recovery. The field crew collected additional detail on the level and the source of contamination for certain materials on these samples. The 20 materials included in the contamination subsort are listed in Table 73. These materials are commonly accepted in curbside recycling programs. They also were included in the contamination subsort in CalRecycle's *California 2008 Statewide Waste Characterization Study*.

Table 73. Materials Included in the Contamination Subsort

Paper	Metal
Uncoated Corrugated Cardboard	Tin/Steel Cans - CRV Bimetal Containers
Paper Bags	Tin/Steel Cans - Other
Newspaper	Aluminum Cans - CRV
White Ledger	Aluminum Cans - Non-CRV
Other Office Paper	**Plastic**
Other Miscellaneous Paper - Compostable	PETE Containers - CRV
Other Miscellaneous Paper - Other	PETE Containers - Non-CRV
Remainder/Composite Paper - Rigid Food and Beverage Cartons	HDPE Containers - CRV
Remainder/Composite Paper - Compostable	HDPE Containers - Non-CRV
Remainder/Composite Paper - Other	Miscellaneous Plastic Containers (#3-&7) - CRV
	Miscellaneous Plastic Containers (#3-&7) - Non-CRV

The field crew assessed the level of contamination for these 20 materials using the following guidelines:

Clean. Material not soiled or contaminated in the bin that could reasonably be expected to be recycled in recycling programs targeting the material without special processing, cleaning, and/or repair. For example, a clean plastic soda bottle, dry office paper, or a clean, dry, and still folded newspaper.

Figure 65. Clean Materials

Bin-Contaminated. Material that appears to have been contaminated after disposal. Typically these materials are contaminated with moisture or food, such as a newspaper wet from a leaked beverage, a plastic soda bottle covered with food on the outside, or a bottle or can covered in grass clippings.

Figure 66. Bin-Contaminated Materials

Source-Contaminated. Material that appears to have been contaminated through use or prior to disposal. For example, cardboard with a lot of tape, newspaper covered with paint used for masking, newspaper used to wrap fish, paper plates with food residue, or peanut butter jars with residue.

Figure 67. Source-Contaminated Materials

The field crew did not subsort *magazines and catalogs* or *phone books and directories*. The contaminated portion of these materials was calculated by applying the contaminated portion from the other subsorted **Curbside Recyclable** paper material types to the *magazines and catalogs* and *phone books and directories* quantities on a sample by sample basis. The composition and quantity data for Task 3 generator sites, including the contamination subsort detail, is included at the end of Appendix E: Detailed Composition Tables.

To estimate the proportion of commercial-sector generation actually recovered through curbside programs, the project team split the 82 material types considered for this study into two groups: standard recoverable materials and all other materials.

- **Standard Recoverable Materials:** materials that are accepted in most Curbside Recycle or Curbside Organics programs around the state, based on research done by CalRecycle on materials listed as acceptable in local jurisdiction programs.
- **All Other Materials:** all materials that are not included in the list of standard recoverable materials.

The two groups were correlated with the contamination subsort data to estimate the curbside recovery rate. Table 74 lists the standard recoverable materials and their recoverability for the Task 3 analysis. Materials marked with an X are considered recovered for the purposes of the analysis.

As shown in Table 75, approximately 21 percent of the material generated at businesses and multi-family complexes is recovered through curbside diversion programs capturing the standard recoverable materials.

Table 74. Standard Recoverable Materials for Task 3 Analysis

	Curbside Recycle Bins			Curbside Organics Bins		
	Clean	Bin Contaminated	Source Contaminated	Clean	Bin Contaminated	Source Contaminated
Uncoated Corrugated Cardboard	X			X	X	X
Paper Bags	X			X	X	X
Newspaper	X			X	X	X
White Ledger Paper	X			X	X	X
Other Office Paper	X			X	X	X
Magazines and Catalogs	X			X	X	X
Phone Books and Directories	X			X	X	X
Other Miscellaneous Paper - Compostable				X	X	X
Other Miscellaneous Paper - Other	X			X	X	X
Remainder/Composite Paper - Compostable				X	X	X
Clear Glass Bottles and Containers - CRV	X					
Clear Glass Bottles and Containers - Non-CRV	X					
Green Glass Bottles and Containers - CRV	X					
Green Glass Bottles and Containers - Non-CRV	X					
Brown Glass Bottles and Containers - CRV	X					
Brown Glass Bottles and Containers - Non-CRV	X					
Other Colored Glass Bottles and Containers - CRV	X					
Other Colored Glass Bottles and Containers - Non-CRV	X					
Tin/Steel Cans - CRV Bimetal Containers	X					
Tin/Steel Cans - Other	X					
Aluminum Cans - CRV	X					
Aluminum Cans - Non-CRV	X					
PETE Containers - CRV	X					
PETE Containers - Non-CRV	X					
HDPE Containers - CRV	X					
HDPE Containers - Non-CRV	X					
Miscellaneous Plastic Containers - CRV	X					
Miscellaneous Plastic Containers - Non-CRV	X					
Food				X	X	X
Leaves and Grass				X	X	X
Prunings and Trimmings				X	X	X

Materials marked with an X are considered recovered for the purposes of the analysis.

Table 75. Recovery Rate for Commercial Curbside Diversion

	Disposed Tons			Curbside Recycle Tons			Curbside Organics Tons			Recovered Tons	Generated Tons	Percent Recovered
	Clean	Bin Contaminated	Source Contaminated	Clean	Bin Contaminated	Source Contaminated	Clean	Bin Contaminated	Source Contaminated			
Uncoated Corrugated Cardboard	155,292	71,482	8,253	1,035,182	17,201	58,076	3,116	63	18	**1,038,380**	**1,348,685**	**77.0%**
Paper Bags	19,268	21,988	6,714	15,945	62	485	39	0	0	**15,984**	**64,502**	**24.8%**
Newspaper	104,316	120,611	19,708	89,170	34,772	0	45	812	0	**90,027**	**369,434**	**24.4%**
White Ledger Paper	119,029	43,706	8,382	133,712	1,867	1,123	0	48	0	**133,760**	**307,867**	**43.4%**
Other Office Paper	116,385	57,112	6,007	103,406	3,071	1,733	45	369	0	**103,821**	**288,130**	**36.0%**
Magazines and Catalogs	44,032	8,720	23,621	79,857	1,540	2,018	0	0	0	**79,857**	**159,788**	**50.0%**
Phone Books and Directories	2,097	377	1,597	2,025	417	151	0	0	0	**2,025**	**6,664**	**30.4%**
Other Miscellaneous Paper - Compostable	14,048	14,805	16,727	47,765	1,779	13,277	6,065	397	1,756	**8,218**	**116,618**	**7.0%**
Other Miscellaneous Paper - Other	174,951	175,361	45,380	118,719	1,496	4,950	420	202	0	**119,341**	**521,479**	**22.9%**
Remainder/Composite Paper - Compostable	194,629	7,396	1,098,247	14,581	51	4,250	0	3,954	23	**3,978**	**1,323,132**	**0.3%**
Clear Glass Bottles and Containers - CRV*	54,505	N/A	N/A	29,604	N/A	N/A	424	N/A	N/A	**29,604**	**84,533**	**35.0%**
Clear Glass Bottles and Containers - Non-CRV*	48,486	N/A	N/A	41,179	N/A	N/A	4,628	N/A	N/A	**41,179**	**94,292**	**43.7%**
Green Glass Bottles and Containers - CRV*	12,200	N/A	N/A	9,563	N/A	N/A	0	N/A	N/A	**9,563**	**21,762**	**43.9%**
Green Glass Bottles and Containers - Non-CRV*	36,110	N/A	N/A	45,811	N/A	N/A	7,325	N/A	N/A	**45,811**	**89,246**	**51.3%**
Brown Glass Bottles and Containers - CRV*	32,698	N/A	N/A	20,823	N/A	N/A	397	N/A	N/A	**20,823**	**53,918**	**38.6%**
Brown Glass Bottles and Containers - Non-CRV*	5,293	N/A	N/A	6,551	N/A	N/A	1,125	N/A	N/A	**6,551**	**12,969**	**50.5%**
Other Colored Glass Bottles and Containers - CRV*	297	N/A	N/A	0	N/A	N/A	0	N/A	N/A	**0**	**297**	**0.0%**
Other Colored Glass Bottles and Containers - Non-CRV*	667	N/A	N/A	349	N/A	N/A	0	N/A	N/A	**349**	**1,016**	**34.3%**
Tin/Steel Cans - CRV Bimetal Containers	1,104	0	4,345	1,260	0	39	22	0	0	**1,260**	**6,770**	**18.6%**
Tin/Steel Cans - Other	20,125	6,214	46,215	13,466	0	8,870	0	617	0	**13,466**	**95,507**	**14.1%**
Aluminum Cans - CRV	13,151	1,261	3,879	4,610	0	0	62	20	2	**4,610**	**22,984**	**20.1%**
Aluminum Cans - Non-CRV	2,787	161	3,126	2,151	0	936	0	0	0	**2,151**	**9,161**	**23.5%**
PETE Containers - CRV	31,151	1,258	12,569	20,186	0	564	373	59	0	**20,186**	**66,159**	**30.5%**
PETE Containers - Non-CRV	6,092	1,098	26,843	18,511	487	12,689	32	152	13	**18,511**	**65,918**	**28.1%**
HDPE Containers - CRV	3,863	0	3,487	1,318	0	13	0	0	0	**1,318**	**8,681**	**15.2%**
HDPE Containers - Non-CRV	10,182	1,333	47,174	20,752	1,561	4,710	23	56	0	**20,752**	**85,790**	**24.2%**
Miscellaneous Plastic Containers - CRV	1,229	256	3,713	282	0	17	0	0	0	**282**	**5,497**	**5.1%**
Miscellaneous Plastic Containers - Non-CRV	9,717	1,032	35,081	28,259	0	5,916	197	50	52	**28,259**	**80,303**	**35.2%**
Food*	3,320,900	N/A	N/A	65,473	N/A	N/A	275,510	N/A	N/A	**275,510**	**3,661,883**	**7.5%**
Leaves and Grass*	432,571	N/A	N/A	416	N/A	N/A	1,373,674	N/A	N/A	**1,373,674**	**1,806,661**	**76.0%**
Prunings and Trimmings*	259,666	N/A	N/A	6,269	N/A	N/A	28,603	N/A	N/A	**28,603**	**294,538**	**9.7%**
Standard Recoverable Materials Subtotal	***5,246,840***	***534,172***	***1,421,068***	***1,977,196***	***64,305***	***119,817***	***1,702,125***	***6,800***	***1,863***	***3,537,852***	***11,074,185***	***31.9%***
All Other Materials**	N/A	N/A	5,330,706	N/A	N/A	288,020	N/A	N/A	5,121	**0**	**5,623,847**	**0%**
Statewide Total for Businesses and Multifamily Complexes with Curbside Diversion	**5,246,840**	**534,172**	**6,751,774**	**1,977,196**	**64,305**	**407,836**	**1,702,125**	**6,800**	**6,984**	**3,537,852**	**16,698,032**	**21.2%**

** These materials were not subsorted for contamination. All glass containers, food, leave and grass, and prunings and trimmings are assumed to be recovered if in the appropriate bin.*

***These are materials that are not typically recoverable and most of these materials were not subsorted for contamination.*

Recruitment Survey Questions

During the recruitment process, recruitment staff asked businesses several survey questions about other waste diversion and reduction practices, waste scavenging, and their knowledge of California's Mandatory Commercial Recycling (MCR) law.

Recruitment staff asked businesses about their participation in five waste reduction activities: a waste exchange, used equipment or edible food donation, ink or toner cartridge recycling, and converting from paper towels to hand dryers. The responses are summarized in in Table 76.

Table 76. Survey Responses for Partipation in Waste Reduction Activites

Proportion of businesses that reported participating in a waste exchange:	1%
Proportion of businesses that reported donating used equipment:	13%
Proportion of food-related businesses* that reported donating leftover food:	17%
Proportion of businesses that reported recycling ink and toner cartridges:	50%
Proportion of businesses that reported converting from paper towels to hand dryers:	7%

* Includes Group 3 (Education), Group 4 (Hotels and Lodging), Group 6 (Manufacturing – Food and Nondurable Wholesale), Group 10 (Restaurants), and Group 11 (Retail Trade – Food and Beverage Stores).

Recruitment staff also asked businesses and multi-family complexes if their waste or recycling containers were scavenged for recoverable materials. As illustrated in Table 77, about 23 percent of businesses reported that their containers were occasionally or regularly scavenged. Similarly, 21 percent of multi-family complexes reported occasional or regular occurrences of scavenging. Businesses reported that the common materials targeted for scavenging included aluminum cans, plastic bottles, cardboard, and pallets. Many businesses also reported that employees will informally collect cans and bottles for redemption. When discussing scavenging, many businesses mentioned they also have regular occurrences of illegal dumping.

Table 77. Survey Responses for Scavenging

Businesses that reported outside scavenging of disposal or recycling containers:	23%
Multi-family complexes that reported outside scavenging of disposal or recycling containers:	21%

When recruitment staff asked businesses if they were aware of the state requirements for mandatory commercial recycling, about 12 percent of businesses reported knowing

about these requirements. Of these businesses, a little over 44 percent reported that they changed their recycling practices or pickup service as a result of these requirements. These results are also reported in Table 78.

Table 78. Survey Responses for MCR

Businesses that reported knowing about MCR:	12%
Proportion of these that reported changing their recycling practices:	44%

Weight-Based Disposal Rate Study

The goal of the weight-based disposal rate study was to design and conduct a study that would provide CalRecycle with an alternative method for estimating waste disposal rates at businesses. Disposal rate data collection for this study was different from the Task 2 disposal rate data collection in two ways: 1) the project team weighed entire dumpsters rather than only portions of materials as in Task 2; and 2) the project team used a bin-fullness sensor system, Enevo™, to track collection events. The Enevo™ system uses wireless sensors that are installed in waste containers to detect bin fullness and record collection events. Each sensor sends this data over wireless cellular networks to the Enevo™ servers to populate a visualization system that is accessible online.

This section presents the methods and results of this study and comparisons to the results of Task 2.

Summary of Methods

Selection and Recruitment Process

The weight-based disposal rate study was carried out in six jurisdictions where the local hauler approved installing Enevo™ sensors in their containers over the course of the study. The study included two jurisdictions in each of the Bay Area, Southern, and Central Valley regions. This study focused on four businesses groups: Manufacturing – All Other; Restaurants; Retail Trade – All Other; and Services – Professional, Technical, & Financial.

The project team recruited individual businesses for participation in this weight-based disposal rate study using many of the same methods and tools used to recruit businesses for Task 2, though the sites used for the test did not participate in Task 2. The project team contacted each business to confirm eligibility and to collect employment data, operational hours, and collection schedules.

Site Visits

Project team field staff collected weight and volume measurements at each of the selected businesses over a two-week period in February and March of 2015. During this period, field staff:

- Installed Enevo™ sensors in all of the garbage dumpsters at each participating business.
- Used a pallet jack to weigh garbage dumpsters right before collection events. Field staff visited selected sites two to three times to take separate weight measurements. Field staff also weighed empty dumpsters to get a weight that the project team could subtract from the total weight of the full dumpster and generate the true weight of material in the dumpster.
- Recorded the length, width, and height of all accumulated material to the nearest inch each time a container was weighed.

Calculations

The project team estimated annual tonnage for each site included in this study using a weight-based disposal rate. We calculated this rate by dividing the weight of waste material (determined using a pallet jack with an integrated scale) by the hours of operation since the last collection event recorded by the Enevo™ system. We then multiplied this rate by annual hours of operation at the business to estimate annual tons.

We estimated the tons per employee per year, TPEPY, yards per employee per year, YPEPY, and average waste densities using the same calculations as in Task 2, which are presented in Appendix C: Description of Calculations.

Results

Table 79 compares the results of the Task 2 study (Method 1) to the results of the weight-based disposal study (Method 2). The comparison is based on the results at 183 Task 2 sites and 131 sites sampled as part of the weight-based disposal study. Task 2 sites included in this comparison are businesses from one of the four targeted business groups and located in the Bay Area, Southern, or Central Valley region. The YPEPY estimates from Method 2 are lower than the estimates from Method 1 for all industry groups. The TPEPY estimates from Method 2 are also lower in all but one group, Restaurants. The Manufacturing – All Other and Restaurant density estimates from Method 2 are higher than the Method 1 density estimates. Method 2 density estimates for the other two industry groups are lower than their Method 1 estimates.

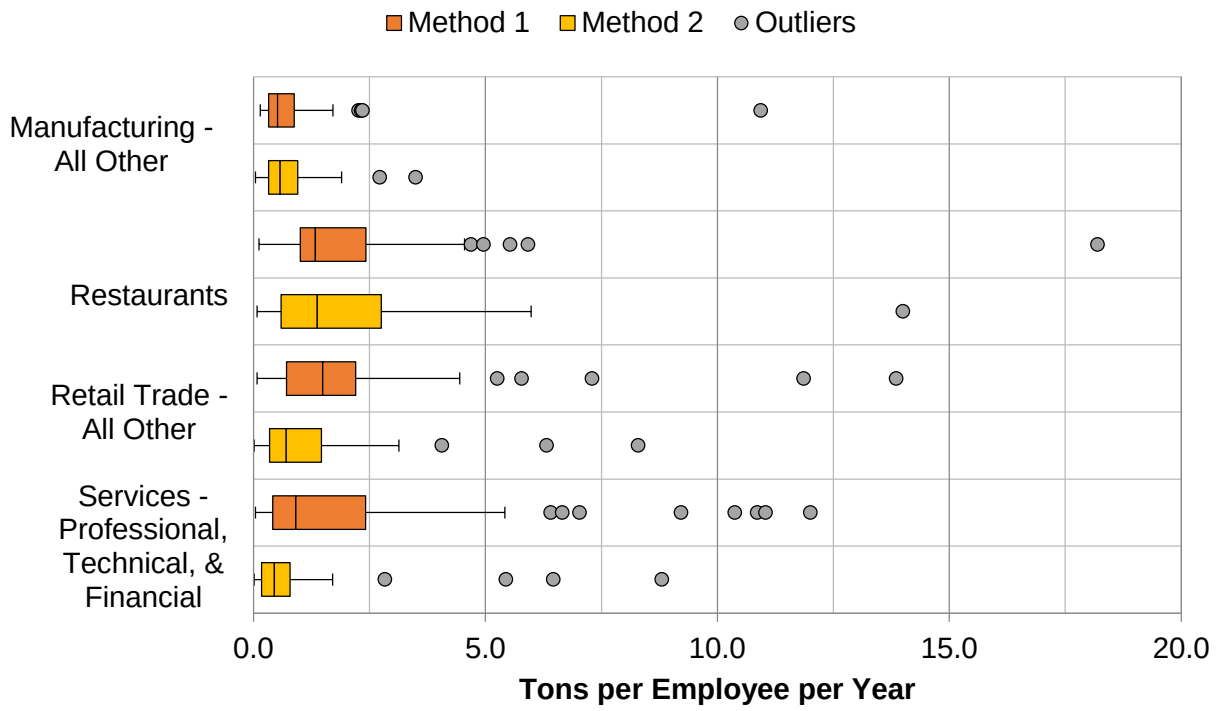
Table 79. Comparison of Task 2 and Weight-Based Disposal Study Results, by Group

	Sampled Sites		Density		Cubic Yards per Empl. per Year		Tons per Empl. per Year	
	Method 1	Method 2	Method 1	Method 2	Method 1	Method 2	Method 1	Method 2
Manufacturing - All Other	46	34	87.96	97.67	10.9	1.7	0.48	0.28
Restaurants	46	34	149.12	157.83	27.4	16.9	2.04	2.37
Retail Trade - All Other	47	33	142.10	99.22	29.7	18.6	2.11	1.15
Services - Professional, Technical, & Financial	44	30	180.21	144.70	15.9	6.7	1.44	0.70

Figure 68 presents the estimated TPEPY for the individual businesses sampled for Method 1 and Method 2 as a box and whisker plot. The bars represent the range of the second and third quartile TPEPYs, separated by a line representing the median value. The whiskers extending from the boxes mark the minimum TPEPY and interquartile range. Possible outliers are indicated with gray circles.

The box plot suggests that Method 2 TPEPY estimates are more representative than Method 1 TPEPY estimates. Most significantly, Method 2 TPEPY estimates for three out of the four business groups have a more normal distribution over the quartiles. Also for three out of the four business groups, Method 2 TPEPY estimates fall within a smaller interquartile range. Similarly, Method 2 consistently generated few outliers, which all occurred within a smaller range than Method 1 TPEPY estimates.

Figure 68. Business TPEPY Quartiles Comparisons of Task 2 and the Weight-Based Disposal Study



These results for Method 2 can be attributed to a more robust data collection system. For Method 2, the field crew collected multiple weight and volume measurements for each business compared to Method 1, which collected a single volume and weight measurement for each business. Method 2 accumulation period estimates are also more precise since they are based on actual bin collection times as recorded by the sensors, rather than estimated collection times reported by businesses. Finally, capturing weights of entire dumpsters both increases sample sizes and provides the information needed to directly estimate a weight based disposal rate, rather than converting volumes using density estimates.

Appendix A: Detailed Methodology

Overview

This Appendix is based on the document that served as the study design for the California Department of Resources Recycling and Recovery (CalRecycle) 2013-2014 Generator Waste Composition Study. This study design describes the methods that Cascadia Consulting Group (Cascadia) used to characterize and quantify disposal and diversion from individual commercial and multi-family generators statewide. The resulting quantification and characterization data provided CalRecycle with information about disposal and diversion activities among commercial and multi-family generators statewide and by industry group. Collecting composition and quantity data for each individual industry group provided information on sources of materials disposed and diverted by businesses and was useful in projecting future changes in the waste stream and developing relevant and effective education, outreach, and legislative strategies.

Cascadia followed a data collection strategy similar to that of the 1999 Statewide Waste Characterization Study and the 2006 Waste Disposal and Diversion Findings for Selected Industry Groups (the two most recent CalRecycle generator-based waste characterization studies). This study was divided into two major tasks:

- **Task 2:** Calculate industry group-specific data on the composition and quantity of disposed materials through sampling at 850 commercial and multi-family generator sites.
- **Task 4:** Calculate industry group-specific data on the composition and quantity of diverted materials through sampling of a 430-member subset of the commercial and multi-family generator sites recruited for the study. This task included any materials diverted through any method (including hauler-collected recycling and organics bins, back-hauling, self-hauling, take-back programs, and other methods) that would normally be a part of the waste stream. It excluded diversion of hazardous materials; medical waste; manufacturing and process chemicals; fats, oils, and grease; industrial quantities of tires; and other items that aren't normally accepted for disposal at a landfill, except for e-waste. Though e-waste is banned from landfills, the study did characterize and quantify the diversion of these materials.

The study also included a special analysis on a 230-member subset of the Task 4 generator sites. This task, referred to throughout the study as **Task 3**, aimed to gather data on materials placed in recycling and organics bins by businesses. This was done in order to develop a general assessment of the amount of recoverable materials put in the multiple bins used in source-separation programs, and of the performance of these programs. Therefore, the Task 3 analysis was limited to the commercially collected diversion at these sites, i.e., materials placed in collection containers provided by haulers or recyclers, that were delivered to a recycling or organics processing facility that processes source-separated materials. The analysis excluded the items diverted through other methods including back-hauling, self-hauling, take-back programs, and other methods.

The rest of this section presents the included industry groups and regions and the planned generator site allocations and distributions, and compares the methodologies for each task.

Detailed recruitment, sampling, and characterization methodologies are presented in the Recruitment and Field Sampling/Sorting sections.

Industry Groups and Regions Included

Cascadia collected data from commercial and multi-family generators for the study from the industry groups and regions defined here.

Industry Groups

Cascadia recruited commercial generators from 16 industry groups as well as multi-family complexes. All industry groups included in this study are listed in Table 81. Groups were designed using the North American Industry Classification System (NAICS). Industry groups were designed with several factors in mind: grouping business types with similar waste generation profiles and purposes; focusing on industries that generate large amounts of organics; focusing on industries with large employment in California; combining industries with less employment or less diversion opportunities; and project budget. The construction industry group was not included in this study because waste associated with this industry was mainly generated at building sites rather than the site of the business office. Waste generated from construction activities and sites was captured in a separate disposal facility-based study by CalRecycle. Groups 8 and 16 were lumped groups: Samples were allocated to the listed subgroups, but results were reported at the group level. The three-digit NAICS codes corresponding to each of the 16 industry groups are listed in Table 80.

Table 80. NAICS Codes and Industry Groups

Group Number	Included NAICS Codes	Industry	2013 Statewide Employment		
			Large Businesses	Small Businesses	Total
1		**Arts, Entertainment, & Recreation**	**278,709**	**45,371**	**324,080**
	711	Performing Arts & Spectator Sports	58,846	9,580	68,425
	712	Museums, Historical Sites & Similar	18,667	3,039	21,706
	713	Gambling, Recreation, Amusement	201,196	32,753	233,949
2		**Durable Wholesale & Trucking**	**483,172**	**158,428**	**641,600**
	423	Durable Goods Wholesalers	216,022	111,284	327,306
	484	Truck Transportation	96,617	17,050	113,667
	491	Postal Service	53,171	9,383	62,554
	492	Couriers & Messangers	50,014	8,826	58,840
	493	Warehousing & Storage	67,348	11,885	79,233
3		**Education**	**1,212,501**	**105,435**	**1,317,936**
	611	Educational Services	1,212,501	105,435	1,317,936
4		**Hotels & Lodging**	**158,238**	**64,633**	**222,871**
	721	Accommodation	158,238	64,633	222,871
5		**Manufacturing - Electronic Equipment**	**217,668**	**72,556**	**290,224**
	334	Computer & Electronic Products	196,007	65,336	261,342
	335	Electrical Equipment & Appliances	21,662	7,221	28,882
6		**Manufacturing - Food & Nondurable Wholesale**	**359,074**	**97,756**	**456,830**
	311	Food Manufacturing	134,664	14,963	149,627
	312	Beverage & Tobacco Products	42,152	4,684	46,836
	424	Nondurable Goods Wholesalers	182,257	78,110	260,367

Group Number	Included NAICS Codes	Industry	2013 Statewide Employment		
			Large Businesses	Small Businesses	Total
7		**Manufacturing - All Other**	**567,075**	**279,831**	**846,906**
	313	Textile Mills	5,561	3,266	8,827
	314	Textile Product Mills	5,451	3,202	8,653
	315	Apparel Manufacturing	35,780	21,013	56,793
	316	Leather & Allied Products	2,087	1,226	3,313
	321	Wood Products	10,844	10,009	20,853
	322	Paper Products	13,919	6,856	20,775
	323	Printing & Related Support Activities	27,849	13,716	41,565
	324	Petroleum & Coal Products	10,534	3,146	13,680
	325	Chemical Products	58,706	17,535	76,241
	326	Plastics & Rubber Products	33,667	10,057	43,724
	327	Nonmetallic Mineral Products	18,111	10,636	28,747
	331	Primary Metal Manufacturing	10,471	8,567	19,038
	332	Fabricated Metal Products	69,057	56,502	125,559
	333	Machinery	56,163	15,841	72,004
	336	Transportation Equipment	80,230	22,629	102,859
	337	Furniture & Related Products	16,773	15,483	32,256
	339	Miscellaneous Manufacturing	53,239	31,267	84,506
	511	Publishing Industries, except Internet	58,634	28,879	87,513
8		**Medical & Health**	**1,133,402**	**358,548**	**1,491,950**
	621	Ambulatory Health Care Services	605,603	98,586	704,189
	622	Hospitals	350,226	172,500	522,726
	623	Nursing & Residential Care Facilities	177,573	87,462	265,035
9		**Public Administration**	**738,261**	**64,197**	**802,458**
	92X	Public Administration	738,261	64,197	802,458
10		**Restaurants**	**418,989**	**778,122**	**1,197,110**
	722	Food Services & Drinking Places	418,989	778,122	1,197,110
11		**Retail Trade - Food & Beverage Stores**	**278,847**	**65,409**	**344,256**
	445	Food & Beverage Stores	278,847	65,409	344,256

Group Number	Included NAICS Codes	Industry	2013 Statewide Employment		
			Large Businesses	Small Businesses	Total
12		**Retail Trade - All Other**	**944,648**	**192,475**	**1,137,123**
	441	Motor Vehicle & Parts Dealers	139,787	34,947	174,734
	442	Furniture & Home Furnishings	38,367	12,116	50,483
	443	Electronics & Appliance Stores	46,702	14,748	61,450
	446	Health & Personal Care Stores	82,228	25,967	108,195
	447	Gasoline Stations	42,202	10,551	52,753
	448	Clothing & Clothing Accessories	134,458	42,460	176,918
	451	Sporting Goods, Hobby, Books, Music	52,423	16,555	68,978
	452	General Merchandise Stores	307,049	3,102	310,151
	453	Miscellaneous Store Retailers	69,016	21,795	90,811
	454	Nonstore Retailers	32,414	10,236	42,650
13		**Services - Management, Administrative, Support, & Social**	**1,607,299**	**427,257**	**2,034,556**
	425	Electronic Markets, Agents, Brokers	85,057	22,610	107,667
	551	Management of Companies & Enterprises	172,011	45,725	217,736
	561	Administrative & Support Services	739,136	196,479	935,615
	624	Social Assistance	488,806	129,936	618,742
	813	Religious, Civic, Professional & Similar	122,289	32,507	154,796
14		**Services - Professional, Technical, & Financial**	**1,698,663**	**443,251**	**2,141,914**
	515	Broadcasting, except Internet	39,466	2,971	42,437
	517	Telecommunications	82,153	6,184	88,337
	518	Data Processing, Hosting & Related	21,821	1,642	23,463
	519	Other Information Services	55,767	4,197	59,964
	521	Monetary Authorities - Central Bank	1,158	366	1,524
	522	Credit Intermediation & Related	189,609	59,876	249,485
	523	Financial Investment & Related	65,035	20,538	85,573
	524	Insurance Carriers & Related Activity	141,960	44,829	186,789
	525	Funds, Trusts, Other Financial Vehicles	190	60	250
	531	Real Estate	149,066	47,074	196,140
	532	Rental & Leasing Services	44,551	14,069	58,620
	533	Lessors of Nonfinancial Intangible Assets	2,177	687	2,864
	541	Professional & Technical Services	905,710	240,758	1,146,468

Group Number	Included NAICS Codes	Industry	2013 Statewide Employment		
			Large Businesses	Small Businesses	Total
15		**Services - Repair & Personal**	**189,395**	**111,232**	**300,627**
	811	Repair & Maintenance	91,773	53,899	145,672
	812	Personal & Laundry Services	97,622	57,333	154,955
16		**Not Elsewhere Classified**	**923,939**	**153,434**	**1,077,373**
	111	Crop Production	150,217	24,454	174,671
	112	Animal Production	24,328	3,960	28,288
	113	Forestry & Logging	2,271	370	2,641
	114	Fishing, Hunting & Trapping	401	65	466
	115	Agriculture & Forestry Support Activities	176,879	28,794	205,673
	211	Oil & Gas Extraction	8,480	1,381	9,861
	212	Mining, except Oil & Gas	4,554	741	5,295
	213	Support Activities for Mining	10,967	1,785	12,752
	22X	Utilities	95,129	10,570	105,699
	444	Building Materials & Garden Supplies	91,786	28,985	120,771
	481	Air Transportation	37,192	6,563	43,755
	482	Rail Transportation	155	27	182
	483	Water Transportation	4,296	758	5,054
	485	Transit & Ground Passenger Transport	61,226	10,805	72,030
	486	Pipeline Transportation	2,281	403	2,684
	487	Scenic & Sightseeing Transportation	3,502	618	4,120
	488	Support Activities for Transportation	81,790	14,434	96,224
	512	Motion Picture & Sound Recording	127,713	14,190	141,903
	562	Waste Management & Remediation Services	40,774	4,530	45,304
		Total	**11,209,881**	**3,417,933**	**14,627,814**

For each group, the number of employees in the *Size Break* column of Table 81 distinguished small businesses from large businesses. The size break was selected so that approximately 20 percent of employment in a group fell into small businesses and approximately 80 percent fell into large businesses. During recruitment, we attempted to obtain a 4:1 ratio between large businesses and small businesses for each industry group. This was a group level target; the ratio within each region or season may not be 4:1. Since small businesses often represent the majority of the number of businesses, but large businesses often represent the majority of employment in an industry group, this ensured each size class was properly represented. Very small businesses, those with fewer than five employees, were excluded from the study because they do not generate enough material weekly to meet the minimum sample weights and frequently share bins with other businesses, though the annual employment figures included employment at these small businesses. Multi-family complexes were defined as residences with more than four units. Residences with four or fewer units were not included in this study. Note: Disposal characterization data for multi-family sites was collected as part of the accompanying disposal facility-based study, but multi-family diversion characterization was part of this study.

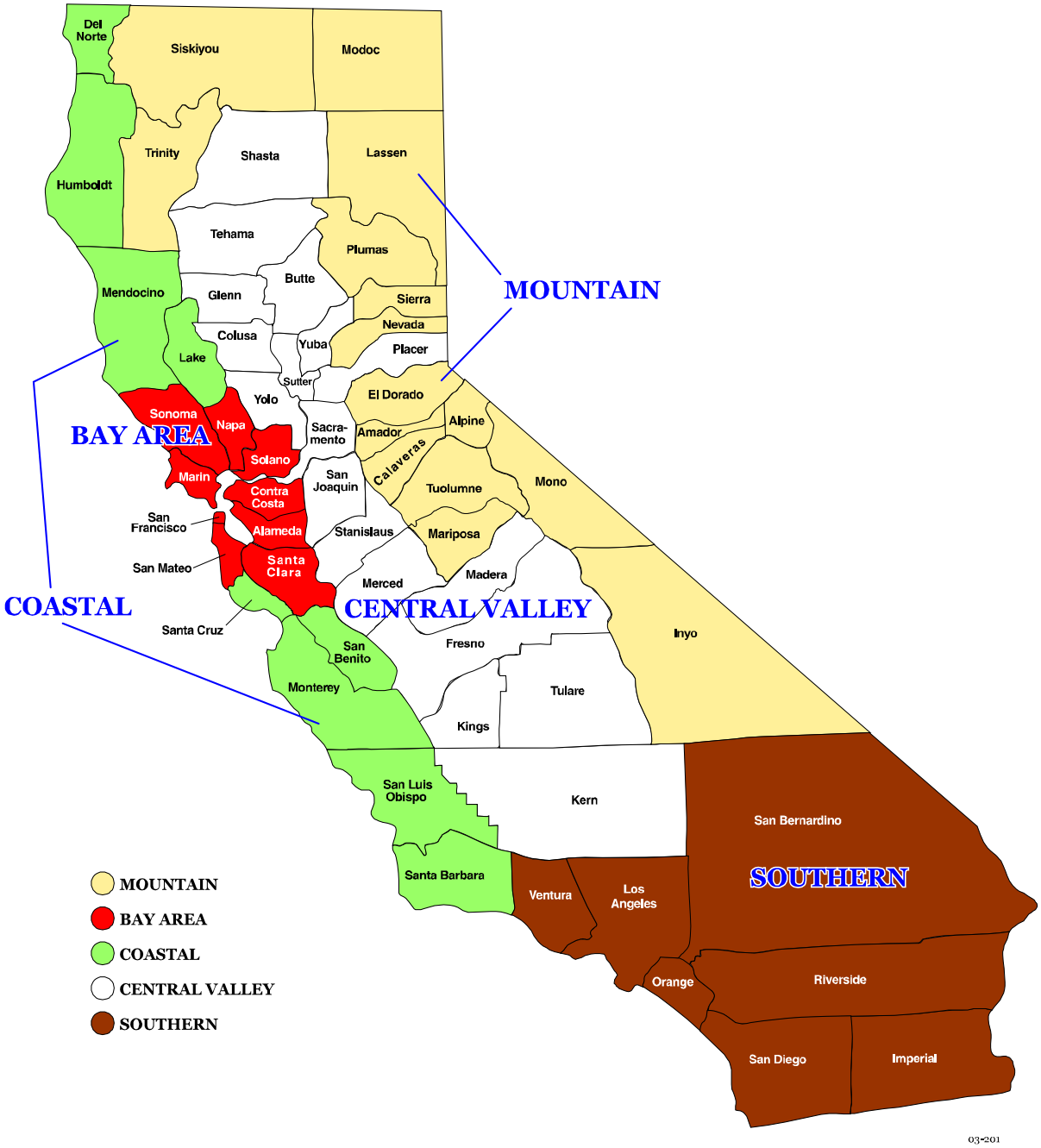
Table 81. Task 2 Industry Groups used for Recruitment and Sampling Goals

Industry Group		Size Break
Number	**Name**	
1	Arts, Entertainment, & Recreation	20
2	Durable Wholesale & Trucking	20
3	Education	20
4	Hotels & Lodging	50
5	Manufacturing - Electronic Equipment	100
6	Manufacturing - Food & Nondurable Wholesale	20
7	Manufacturing - All Other	50
8	**Medical & Health**	
	Ambulatory Health Care Services	*10*
	Hospital, Nursing, & Residential Care Facilities	*50*
9	Public Administration	20
10	Restaurants	20
11	Retail Trade - Food & Beverage Stores	20
12	Retail Trade - All Other	10
13	Services - Management, Administrative, Support, & Social	20
14	Services - Professional, Technical, & Financial	10
15	Services - Repair & Personal	10
16	**Not Elsewhere Classified**	
	Agriculture & Resources	*20*
	Utilities & Waste Management	*20*
	Retail Trade - Building Materials & Garden	*20*
	Transportation - All	*20*
	Motion Picture & Sound Recording	*20*
01	Multifamily	N/A

Regions

Cascadia recruited generators from the five regions illustrated in Figure 69. These were the same regions used in all CalRecycle waste characterization studies. See CalRecycle's 1999 Statewide Waste Characterization Study for background on how regions were developed.

Figure 69. Study Regions



The distinguishing characteristics of the five regions are described below.

- **Coastal**—included the counties on or near the coast that are not in either the Bay Area or Southern regions. The Coastal region is more populated than the rural Mountain region and has a large agricultural component similar to the Central Valley.
- **Bay Area**—included the counties in the San Francisco Bay Area, which are more metropolitan and have strong industrial components.
- **Southern**—included counties that are strongly industrial with large populations and some agricultural influences.
- **Mountain**—included counties that are primarily rural, with strong agricultural economies, low population density, and a low industrial base.
- **Central Valley**—included counties between the Sierra Nevada Mountains and the Coast Range that have a major agricultural base with important population centers and some manufacturing.

Table 82 lists the counties within each region.

Table 82. Division of the State's Counties into Five Sampling Regions

Coastal	Bay Area	Southern	Mountain	Central Valley
Del Norte	Alameda	Imperial	Alpine	Butte
Humboldt	Contra Costa	Los Angeles	Amador	Colusa
Lake	Marin	Orange	Calaveras	Fresno
Mendocino	Napa	Riverside	El Dorado	Glenn
Monterey	San Francisco	San Bernardino	Inyo	Kern
San Benito	San Mateo	San Diego	Lassen	Kings
San Luis Obispo	Santa Clara	Ventura	Mariposa	Madera
Santa Barbara	Solano		Modoc	Merced
Santa Cruz	Sonoma		Mono	Placer
			Nevada	Sacramento
			Plumas	San Joaquin
			Sierra	Shasta
			Siskiyou	Stanislaus
			Trinity	Sutter
			Tuolumne	Tehama
				Tulare
				Yolo
				Yuba

Sample Allocations

Table 83 presents a high-level overview of the recruitment goals and requirements for each task. The recruitment process is detailed in the Recruitment section. Garbage samples were planned to be collected and sorted from all 850 sites. Diversion samples were planned to be collected and sorted from a 430-member subset of the 850 recruited sites. The sampling scheme was designed with the following ideas in mind: a focus on the disposed waste stream, in order to obtain robust data on materials still disposed; statistical variability of the streams (the diverted stream tends to be less variable); including an adequate number of sites to assess source separation for the commercial sector in general; and project logistics and budget constraints.

Table 83. Overview of Recruitment Goals

Task	Number of Recruited Generator Sites Included in the Task	Site Requirements
2	All 800 business and 50 multifamily sites	Business sites must have more than five employees. Multifamily sites must have more than four units. All sites must dispose of at least 200 pounds of garbage per week.
3	200 business and 30 multifamily sites	Sites must have recycling or organics collection service provided by a third party, typically a hauler or recycler. Sites are mostly a subset of the Task 4 sites.
4	400 business and 30 multifamily sites	Sites with any method or level of diversion (including no diversion) are elegible for this task. Sites are a subset of the 850 recruited generators.

Figure 70 illustrates the generator sites overlap between tasks. Sites included in the Task 3 special analysis were a subset of the sites included in Task 4. All Task 3 and Task 4 sites were a subset of the sites included in Task 2.

Figure 70. Recruitment Overlap between Tasks

Cascadia allocated samples approximately evenly among the four field seasons over 1 year, approximately corresponding to winter, spring, summer, and fall. During the sample allocation process, if samples did not split evenly (for example, when trying to split six samples across four seasons), Cascadia allocated samples randomly among the seasons to achieve a whole number distribution. Once the allocations were complete, if there were gross inequalities in the number of samples (for example, if one season was allocated 60 sites and the next was allocated 40 sites when they should each be allocated approximately 50 sites), then the project team reallocated individual sites to even out the distribution.

Task 2 Garbage Sample Allocations

Cascadia allocated the 800 commercial generator sites evenly among the 16 industry groups with 50 generator sites per group. Samples were further allocated to regions within each industry group according to regional employment in that group as shown in Table 84. For example, the Bay Area region accounts for 18 percent of statewide employment in industry Group 6, therefore Cascadia recruited 18 percent of the samples for industry Group 6 from the Bay Area (18 percent * 50 = 9 samples).

In addition to the 800 businesses recruited, the sample allocation included 50 multi-family sites, 10 from each region, as determined by the study design for the accompanying disposal facility-based study.

Table 84. Allocation and Distribution of Recruited Generator Sites

Industry Group		Regions					
Number	**Name**	**Bay Area**	**Coastal**	**Mountain**	**Southern**	**Valley**	**Totals**
1	Arts, Entertainment, & Recreation	11	2	1	30	6	**50**
2	Durable Wholesale & Trucking	10	1	0	31	8	**50**
3	Education	10	2	1	28	9	**50**
4	Hotels & Lodging	11	5	2	27	5	**50**
5	Manufacturing - Electronic Equipment	25	1	0	22	2	**50**
6	Manufacturing - Food & Nondurable Wholesale	9	3	0	25	13	**50**
7	Manufacturing - All Other	10	1	1	34	4	**50**
8	**Medical & Health**	**11**	**2**	**1**	**28**	**8**	**50**
	Ambulatory Health Care Services	*5*	*1*	*1*	*14*	*4*	***25***
	Hospital, Nursing, & Residential Care Facilities	*6*	*1*	*0*	*14*	*4*	***25***
9	Public Administration	8	3	2	23	14	**50**
10	Restaurants	11	2	1	29	7	**50**
11	Retail Trade - Food & Beverage Stores	11	3	1	27	8	**50**
12	Retail Trade - All Other	10	2	1	29	8	**50**
13	Services - Management, Administrative, Support, & Social	12	2	0	30	6	**50**
14	Services - Professional, Technical, & Financial	16	1	0	28	5	**50**
15	Services - Repair & Personal	11	2	0	30	7	**50**
16	**Not Elsewhere Classified**	**7**	**5**	**1**	**22**	**15**	**50**
	Agriculture & Resources	*1*	*5*	*1*	*3*	*12*	***22***
	Utilities & Waste Management	*2*	*0*	*0*	*4*	*1*	***7***
	Retail Trade - Building Materials & Garden	*1*	*0*	*0*	*3*	*1*	***5***
	Transportation - All	*3*	*0*	*0*	*6*	*1*	***10***
	Motion Picture & Sound Recording	*0*	*0*	*0*	*6*	*0*	***6***
	Commercial Subtotals	***183***	***37***	***12***	***443***	***125***	***800***
01	Multifamily	10	10	10	10	10	50
	Totals	**193**	**47**	**22**	**453**	**135**	**850**

Task 4 Recycling Sample Allocations

Cascadia allocated the 400 commercial generator sites evenly among the 16 industry groups, 25 generator sites per group. Samples were further allocated to regions within each industry group according to regional employment in that group. For example, the Bay Area region accounts for 18 percent of statewide employment in Group 6. Therefore, Cascadia recruited approximately 18 percent of the samples for industry Group 6 from the Bay Area (18 percent * 25 = 5 samples). In addition, a total of 30 multi-family sites (six sites per region) were included in Task 4. Where employment proportions resulted in “partial samples” in a region, some discretion was used to assign

whole samples to groups and regions to best represent the employment for the industry group.

Cascadia randomly selected approximately 430 of the 850 recruited generator sites to participate in Task 4. The Task 4 site allocation and distribution is shown in Table 85.

Table 85. Allocation and Distribution of Sites Selected to Participate in Diversion Sampling

Industry Group		Regions					
Number	**Name**	**Bay Area**	**Coastal**	**Mountain**	**Southern**	**Valley**	**Totals**
1	Arts, Entertainment, & Recreation	6	1	1	14	3	**25**
2	Durable Wholesale & Trucking	5	1	0	15	4	**25**
3	Education	5	1	1	13	5	**25**
4	Hotels & Lodging	5	3	1	13	3	**25**
5	Manufacturing - Electronic Equipment	12	1	0	11	1	**25**
6	Manufacturing - Food & Nondurable Wholesale	5	2	0	12	6	**25**
7	Manufacturing - All Other	5	1	1	16	2	**25**
8	**Medical & Health**	**6**	**1**	**1**	**13**	**4**	**25**
	Ambulatory Health Care Services	*3*	*0*	*1*	*6*	*2*	***12***
	Hospital, Nursing, & Residential Care Facilities	*3*	*1*	*0*	*7*	*2*	***13***
9	Public Administration	4	2	1	11	7	**25**
10	Restaurants	5	1	1	14	4	**25**
11	Retail Trade - Food & Beverage Stores	5	2	1	13	4	**25**
12	Retail Trade - All Other	5	2	1	13	4	**25**
13	Services - Management, Administrative, Support, & Social	6	1	0	15	3	**25**
14	Services - Professional, Technical, & Financial	8	1	0	14	2	**25**
15	Services - Repair & Personal	6	1	0	14	4	**25**
16	**Not Elsewhere Classified**	**4**	**3**	**1**	**10**	**7**	**25**
	Agriculture & Resources	*1*	*3*	*1*	*1*	*4*	***10***
	Utilities & Waste Management	*1*	*0*	*0*	*2*	*1*	***4***
	Retail Trade - Building Materials & Garden	*1*	*0*	*0*	*1*	*1*	***3***
	Transportation - All	*1*	*0*	*0*	*3*	*1*	***5***
	Motion Picture & Sound Recording	*0*	*0*	*0*	*3*	*0*	***3***
	Commercial Subtotals	***92***	***24***	***10***	***211***	***63***	***400***
01	Multifamily	6	6	6	6	6	30
	Totals	**98**	**30**	**16**	**217**	**69**	**430**

Task 3 Special Analysis Allocations

Cascadia planned to randomly select 200 of the 800 recruited businesses for the Task 3 analysis. These approximately 200 businesses were a wholly contained subset of the businesses selected to participate in Task 4. The selected businesses had commercially collected, source-separated commercial recycling and/or organics diversion through bin service provided by a hauler or recycler. The number of businesses selected from each industry group and region were approximately proportional to statewide employment in each industry group and region. For example, approximately 0.5 percent of the total statewide employment (all groups combined) was in Group 6 in the Bay Area, so approximately 0.5 percent of the 200 samples (one sample) were selected from that strata. Cascadia also randomly selected 30 multi-family sites with commercial source-separated recycling or compost service from among the 50 recruited multi-family sites. Because the availability of multi-family sites with recycling service was variable between regions, the project team did not set allocations by region.

The 430 generator sites selected to participate in Task 4 included most of the Task 3 sites, but given that the Task 4 requirements were different than the Task 3 requirements, there wasn't a perfect overlap between the two tasks. Table 86 details, by industry group and region, the number of businesses planned to be selected for inclusion in the Task 3 analysis.

Table 86. Distribution and Number of Sites Included in the Task 3 Special Analysis

Industry Group		Regions					
Number	**Name**	**Bay Area**	**Coastal**	**Mountain**	**Southern**	**Valley**	**Totals**
1	Arts, Entertainment, & Recreation	1	0	0	3	1	**5**
2	Durable Wholesale & Trucking	2	0	0	6	1	**9**
3	Education	3	1	0	10	3	**17**
4	Hotels & Lodging	1	0	0	2	0	**3**
5	Manufacturing - Electronic Equipment	2	0	0	2	0	**4**
6	Manufacturing - Food & Nondurable Wholesale	1	0	0	4	2	**7**
7	Manufacturing - All Other	2	0	0	9	1	**12**
8	**Medical & Health**	**4**	**0**	**1**	**12**	**4**	**21**
	Ambulatory Health Care Services	*2*	*0*	*1*	*6*	*2*	***11***
	Hospital, Nursing, & Residential Care Facilities	*2*	*0*	*0*	*6*	*2*	***10***
9	Public Administration	2	1	1	5	3	**12**
10	Restaurants	4	1	0	10	2	**17**
11	Retail Trade - Food & Beverage Stores	1	0	0	3	1	**5**
12	Retail Trade - All Other	3	1	0	9	3	**16**
13	Services - Management, Administrative, Support, & Social	5	1	0	14	3	**23**
14	Services - Professional, Technical, & Financial	9	1	0	16	3	**29**
15	Services - Repair & Personal	1	0	0	2	1	**4**
16	**Not Elsewhere Classified**	**3**	**2**	**0**	**7**	**4**	**16**
	Agriculture & Resources	*0*	*2*	*0*	*1*	*4*	***7***
	Utilities & Waste Management	*1*	*0*	*0*	*2*	*0*	***3***
	Retail Trade - Building Materials & Garden	*1*	*0*	*0*	*1*	*0*	***2***
	Transportation - All	*1*	*0*	*0*	*1*	*0*	***2***
	Motion Picture & Sound Recording	*0*	*0*	*0*	*2*	*0*	***2***
	Total	**44**	**8**	**2**	**114**	**32**	**200**

Comparison of Task Methodologies

The methodologies for each of the three generator tasks were similar, but not the same; this section summarizes the similarities and differences in methodologies between the three tasks.

Methodological Overlap

All three tasks had the following approaches in common:

- **Recruitment efforts**—The same recruitment process was used for all three tasks. The generator sites selected for inclusion in Tasks 3 and 4 were a subset of the generator sites recruited for Task 2.
- **Industry groups**—The same industry group definitions were used in each task.
- **Sample collection process**—A consistent method was used to collect samples for all tasks.
- **Sample sorting procedure**—The same sorting procedure was used for sorting all collected samples, though the Task 2 samples were transported to a local disposal facility for sorting and Task 4 samples were sorted at the generator sites.
- **Material list**—The same list of 82 materials, as defined by CalRecycle, was used to characterize all samples. The complete material list can be found in Appendix B: Material Definitions.

Methodological Differences

The same basic methodology was used in all three tasks; the differences between tasks were isolated to the material streams characterized and the methods used to allocate samples among the regions and industry groups. The main differences between the tasks were:

- **Task 2** characterized and quantified disposal at all 850 recruited generator sites.
- **Task 4** sites were a subset of the 850 total generator sites. All diversion streams (including informal recycling markets and take-back programs) were characterized and quantified, in addition to the disposal stream at the 430 sites selected to participate in this task.
- **Task 3** sites were a subset of the Task 4 sites. For the Task 3 sites, only the commercially collected diversion that was placed in collection containers provided by haulers or recyclers was included in the analysis. The field crew performed a more detailed sort of the Disposed, Curbside Recycle, and Curbside Organics stream samples obtained from Task 3 generators. This detailed subsort consisted of further sorting certain material types according to the degree and source of contamination of the materials. The purpose of

the contamination subsort was to estimate the fraction of the sorted materials that a MRF or organics processor could recover, recognizing that not all "recoverable" material arriving at a facility was in a condition that permits its recovery due to contamination.

Recruitment

Once waste samples for Task 2 were collected from generators, they were taken to a solid waste facility for sorting and disposal. Therefore, sampling areas consisted of areas within a 30-mile radius of randomly selected solid waste facilities (nodes). This section details the sorting facility and generator recruitment processes. In addition, this section details the information that Cascadia's recruiters collected from the nodes and the generators.

Node and generator recruitment were interconnected: Nodes were recruited first, and then generators were recruited within 30 miles of each selected node.

Node Recruitment

CalRecycle staff used CalRecycle's Solid Waste Information System (SWIS) database to identify potential nodes. The pool of potential nodes included only permitted facilities that accept putrescible solid waste (i.e. food waste) for disposal or transfer/processing. The initial list was screened to remove sites that were too small, only processed construction and demolition materials, had limited operations, etc. Except for the Mountain region, the project team recruited one node per region for each of the seasons. Due to the low population and smaller number of businesses in the Mountain region, we only recruited two nodes for that region and only visited the region during two seasons.

CalRecycle staff then mapped the population density around each potential node and eliminated those in areas below a defined population density. The density cutoff was different in each region and reflected the population characteristics of each region. Staff then categorized the remaining potential nodes for each region as being in either high or low population density areas. To select four nodes for each region, staff randomized each list of potential nodes, started recruitment calls at the top of the list, and continued until we recruited three facilities in high-density areas and one facility in a low-density area.

The recruitment process included contacting the randomly ordered potential nodes, verifying their suitability as a sorting location, and confirming their willingness to participate. For each selected facility, we obtained contact information for individuals associated with the facility who (1) could authorize permission for data collection events, and (2) were responsible for managing the facility on a day-to-day basis.

The recruiters used a script for node recruitment. This script included a brief introduction to the study and to the needs of the field crew, and it asked for basic information about the best on-site point of contact, the facility's operations, and the facility's ability to

accommodate a space for sample storage and sorting. The recruitment script can be found in Appendix D: Field Forms.

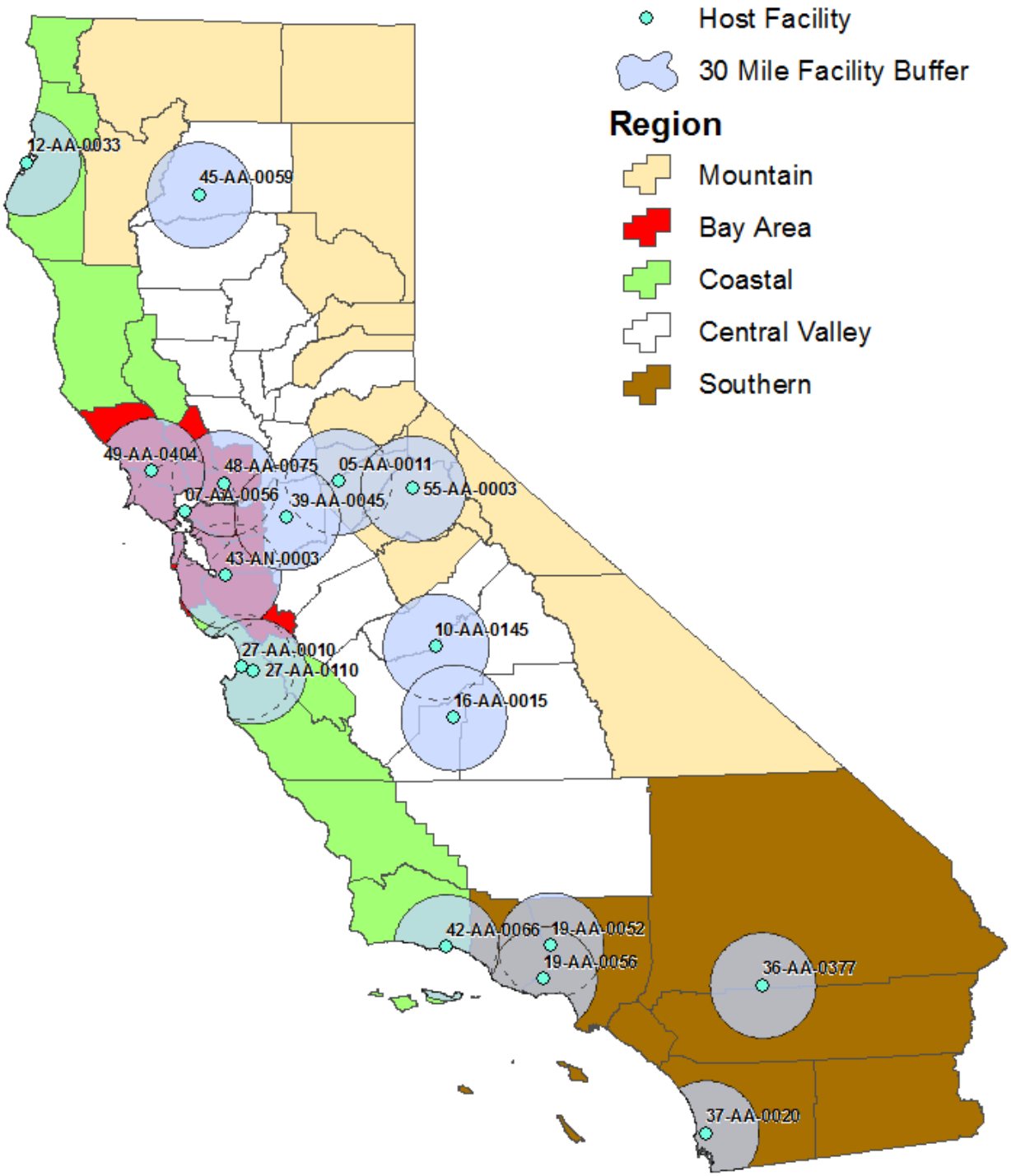
The 18 facilities listed in Table 87 were recruited as nodes. Through the course of the study, some sites dropped out and other nearby sites were used as sorting sites, although the sampling areas around the original nodes remained the same.

Table 87. Selected Nodes

Region	SWIS Number	Facility Name	Size	County	Season
Coastal					
	12-AA-0033	Hawthorne Street Transfer Station	Small	Humboldt	February
	27-AA-0110	Sun St. Transfer Station	Large	Monterey	April
	27-AA-0010	Monterey Peninsula Landfill	Large	Monterey	July
	42-AA-0066	MarBorg C&D Recycling &Transfer Facility	Large	Santa Barbara	October
Bay Area					
	43-AN-0003	Newby Island LF	Large	Santa Clara	February
	07-AA-0056	Golden Bear Transfer Station	Large	Contra Costa	April
	48-AA-0075	Potrero Hills Landfill	Large	Solano	July
	49-AA-0404	Central Transfer Station	Small	Sonoma	October
Mountain					
	05-AA-0011	Paloma Transfer Station	Large	Calaveras	April
	55-AA-0003	Pinecrest Transfer Station	Small	Tuolumne	July
Southern					
	36-AA-0377	Morongo Valley (Trails End)	Small	San Bernardino	February
	19-AA-0052	Chiquita Canyon Landfill	Large	Los Angeles	April
	37-AA-0020	West Miramar Sanitary Landfill	Large	San Diego	July
	19-AA-0056	Calabasas Sanitary Landfill	Large	Los Angeles	October
Valley					
	39-AA-0045	Recology Stockton	Large	San Joaquin	February
	16-AA-0015	KWRA Material Recovery Facility	Large	Kings	April
	10-AA-0145	Rice Road Recyclery & Transfer Station	Large	Fresno	July
	45-AA-0059	City of Redding Transfer Station/MRF	Small	Shasta	October

Cascadia assigned nodes to sampling seasons in the order that nodes were recruited. For instance, the first node recruited in each region was assigned to the first season (February), the second node was assigned to the second season (April), and so on. If needed, schedules were adjusted if requested by the selected facilities. We planned to visit the Mountain Region in April and July to avoid winter weather events that could block access to remote mountain locations. The nodes are mapped in Figure 71 along with their SWIS number and the 30 mile sample area around each node from which generators sites were recruited.

Figure 71. Map of Nodes with their SWIS Number



Generator Site Recruitment

The generator recruitment process involved two key steps. First, the project team made initial phone calls to potential businesses to solicit their participation in the study. Second, the recruiters conducted follow-up calls to businesses that were willing and deemed eligible to participate in the study. These follow-up calls collected information regarding collection service, waste disposal and recycling practices, and logistics to aid in scheduling site visits. These two steps are presented in detail in the Recruitment Process section below. Cascadia continued recruitment until 800 businesses and 50 multi-family generators agreed to participate in the study. We collected garbage samples from all 800 businesses and 50 multi-family sites. An additional 80 contingency businesses (for a total of 880 businesses) were recruited to provide alternate sites in case a business declined to participate once the field crew arrived or logistical issues arose around the site visit.

Recruitment Scripts

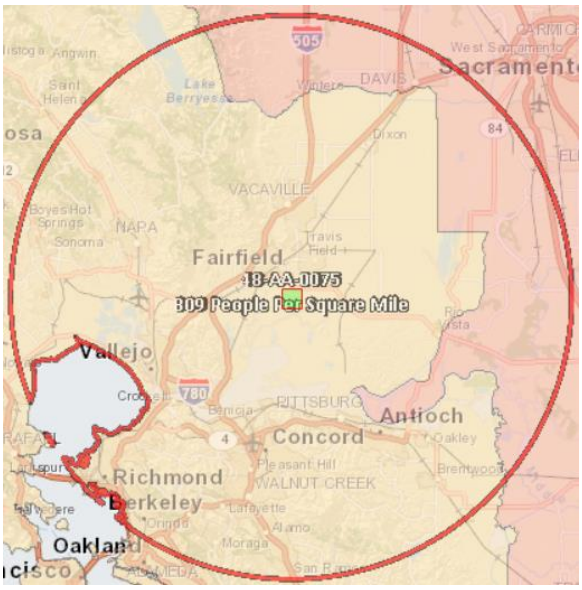
Cascadia provided a script for recruitment staff to use during generator recruitment. The script included: methods for staff to introduce the study concepts; methods to recruit generators to participate in the study; screening criteria that determined if generators were eligible for the study; and prompts for recruiters to collect the required contact information for the follow-up calls. Cascadia also provided a script for recruitment staff to use during follow-up calls to the recruited generators to collect information regarding collection service, waste disposal and recycling practices, and logistics to aid in scheduling site visits. Refer to Appendix D: Field Forms for an example of the Initial Business Recruitment Script.

List of Eligible Business Sites

The project team acquired a list of businesses (with contact information) to include in the recruitment from a private business data clearinghouse. The steps in this process were:

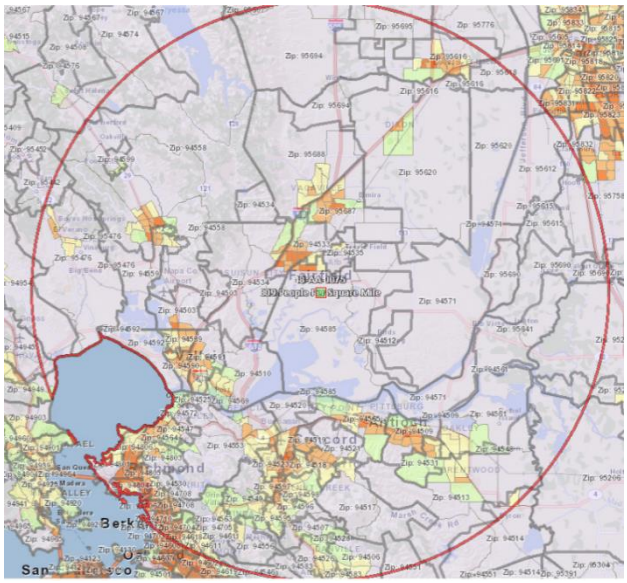
- Map a 30 mile-radius circle around each selected node using GIS software. If the circle included areas from other regions, those areas were eliminated from the sampling area. For example, the orange region shown in Figure 72 would have been removed from the sampling area for this node (Potrero Hills Landfill) because the counties in the orange area were included in the Central Valley region and the node was part of the Bay Area region.

Figure 72. Node with 30-Mile Circle



- Determine which ZIP codes were wholly or substantially within the node circle (GIS software was used to determine the percent of each ZIP code within the circle). ZIP codes outside of the region were excluded. For ZIP codes partially within the circle, if the ZIP code's major population center was within the node circle, the ZIP code was included. If the ZIP code's major population center was outside the node circle, the ZIP code was excluded. Figure 73 shows an example map with the ZIP code and population density information used to finalize ZIP code lists for each node.

Figure 73. Example Node with ZIP Codes



- Purchase a list of all businesses with more than five employees within the included ZIP codes. Businesses with fewer than five employees were excluded because they do not generate enough material weekly to meet the minimum sample weights.
- Randomize the list order, assign each business a unique ID number, and organize the list of businesses by industry group and node. Then, we imported the organized generator information into the recruitment database.

The ZIP codes for each node are listed in Table 88 through Table 92.

Table 88. ZIP Codes in Bay Area Node, by Season

Bay Area										
February			April				July		October	
94002	94536	95037	94005	94502	94591	94925	94503	94598	94503	94973
94010	94538	95050	94010	94503	94592	94930	94506	94599	94508	95401
94019	94539	95051	94014	94506	94595	94931	94507	94609	94515	95403
94020	94541	95053	94015	94507	94596	94933	94510	94611	94558	95404
94021	94542	95054	94030	94510	94597	94938	94512	94618	94559	95405
94022	94544	95070	94038	94517	94598	94939	94513	94702	94574	95407
94024	94545	95110	94044	94518	94599	94941	94517	94703	94576	95409
94025	94546	95111	94066	94519	94601	94945	94518	94704	94589	95436
94027	94550	95112	94080	94520	94602	94946	94519	94705	94590	95439
94028	94551	95113	94102	94521	94603	94947	94520	94706	94592	95442
94030	94552	95116	94103	94523	94605	94949	94521	94707	94599	95444
94035	94555	95117	94104	94525	94606	94951	94523	94708	94901	95446
94040	94556	95118	94105	94526	94607	94952	94525	94709	94903	95448
94041	94560	95119	94107	94528	94608	94954	94526	94710	94904	95450
94043	94566	95120	94108	94530	94609	94956	94528	94720	94922	95452
94061	94568	95121	94109	94533	94610	94960	94530	94801	94923	95462
94062	94577	95122	94110	94534	94611	94963	94531	94803	94924	95465
94063	94578	95123	94111	94541	94612	94964	94533	94804	94925	95472
94065	94579	95124	94112	94542	94613	94965	94534	94805	94928	95476
94066	94580	95125	94114	94544	94618	94970	94535	94806	94929	95492
94070	94583	95126	94115	94545	94619	94973	94547	95476	94930	
94074	94586	95127	94116	94546	94621	95442	94548	95620	94931	
94085	94587	95128	94117	94547	94702	95476	94549	95687	94933	
94086	94588	95129	94118	94549	94703		94553	95688	94937	
94087	94595	95130	94121	94552	94704		94556		94938	
94089	94601	95131	94122	94553	94705		94558		94939	
94128	94602	95132	94123	94556	94706		94559		94940	
94301	94603	95133	94124	94558	94707		94561		94941	
94303	94605	95134	94127	94559	94708		94563		94945	
94304	94606	95135	94128	94563	94709		94564		94946	
94305	94610	95136	94129	94564	94710		94565		94947	
94306	94611	95138	94130	94565	94720		94569		94949	
94401	94613	95139	94131	94569	94801		94571		94951	
94402	94619	95140	94132	94572	94803		94572		94952	
94403	94621	95141	94133	94577	94804		94585		94954	
94404	95002	95148	94134	94578	94805		94589		94956	
94501	95008	95192	94158	94579	94806		94590		94960	
94502	95013		94401	94580	94901		94591		94963	
94506	95014		94402	94583	94903		94592		94964	
94507	95030		94403	94585	94904		94595		94970	
94526	95032		94404	94589	94920		94596		94971	
94528	95035		94501	94590	94924		94597		94972	

Table 89. ZIP Codes in Coastal Node, by Season

Coastal			
February	April	July	October
95501	93901	93901	93013
95503	93905	93905	93067
95519	93906	93906	93101
95521	93907	93907	93103
95524	93908	93908	93105
95525	93923	93923	93106
95528	93924	93924	93108
95536	93925	93925	93109
95540	93926	93926	93110
95547	93933	93933	93111
95549	93940	93940	93117
95550	93943	93943	93460
95551	93950	93950	93463
95562	93953	93953	
95564	93955	93955	
95565	93960	93960	
95570	95003	95003	
95573	95004	95004	
	95010	95010	
	95012	95012	
	95019	95019	
	95023	95023	
	95039	95039	
	95045	95045	
	95060	95060	
	95062	95062	
	95065	95064	
	95073	95065	
	95076	95066	
		95073	
		95076	

Table 90. ZIP Codes in the Mountain Node, by Season

Mountain	
April	July
95222	95223
95223	95245
95228	95246
95232	95247
95245	95251
95246	95255
95247	95257
95249	95310
95251	95321
95252	95335
95255	95346
95257	95364
95310	95370
95327	95372
95370	95379
95623	95383
95629	95666
95640	
95642	
95665	
95669	
95682	
95684	
95685	
95689	

Table 91. ZIP Codes in the Southern Node, by Season

Southern											
February	April			July			October				
92201	90024	91302	91390	91901	92081	92152	90001	90049	90401	91345	93003
92203	90025	91303	91401	91902	92082	92154	90002	90056	90402	91350	93004
92210	90027	91304	91402	91910	92083	92155	90003	90057	90403	91351	93010
92211	90028	91304	91403	91911	92084	92173	90004	90061	90404	91352	93012
92220	90035	91306	91405	91913	92091	92182	90005	90062	90405	91354	93015
92223	90036	91307	91406	91914	92096		90006	90064	90503	91355	93021
92230	90038	91307	91411	91915	92101		90007	90065	90504	91356	93030
92234	90046	91311	91423	91916	92102		90008	90066	90506	91360	93033
92240	90048	91311	91436	91917	92103		90010	90067	91011	91361	93035
92241	90049	91316	91501	91932	92104		90011	90068	91020	91362	93036
92252	90064	91320	91502	91935	92105		90012	90069	91040	91362	93041
92253	90067	91321	91504	91941	92106		90013	90071	91042	91364	93042
92256	90068	91324	91505	91942	92107		90014	90073	91201	91367	93043
92260	90069	91325	91506	91945	92108		90015	90077	91202	91371	93060
92262	90073	91326	91521	91950	92109		90016	90089	91203	91377	93063
92264	90077	91330	91522	91977	92110		90017	90095	91204	91381	93063
92270	90095	91331	91523	91978	92111		90018	90210	91205	91384	93065
92276	90210	91335	91601	92003	92113		90019	90211	91206	91387	93066
92277	90211	91340	91602	92007	92114		90020	90212	91207	91390	
92282	90212	91342	91604	92008	92115		90021	90230	91208	91401	
92284	90263	91343	91605	92009	92116		90024	90232	91214	91402	
92285	90265	91344	91606	92014	92117		90025	90245	91301	91403	
92305	90272	91345	91607	92019	92118		90026	90247	91302	91405	
92314	90290	91350	91608	92020	92119		90027	90249	91303	91406	
92315	90401	91351	93010	92021	92120		90028	90250	91304	91411	
92320	90402	91352	93012	92024	92121		90029	90254	91304	91423	
92339	90403	91354	93015	92025	92122		90031	90260	91306	91436	
92399	90404	91355	93021	92026	92123		90033	90263	91307	91501	
92549	91011	91356	93060	92027	92124		90034	90265	91311	91502	
92583	91020	91360	93063	92029	92126		90035	90265	91316	91504	
	91040	91361	93065	92037	92127		90036	90266	91320	91505	
	91042	91361	93066	92040	92128		90037	90272	91321	91506	
	91201	91362	93510	92054	92129		90038	90277	91324	91521	
	91202	91362	93532	92056	92130		90039	90278	91325	91522	
	91203	91364	93551	92057	92131		90041	90290	91326	91523	
	91204	91367		92064	92133		90042	90291	91330	91601	
	91206	91371		92065	92134		90043	90293	91331	91602	
	91207	91377		92067	92135		90044	90301	91335	91604	
	91208	91381		92069	92136		90045	90302	91340	91605	
	91214	91384		92071	92139		90046	90303	91342	91606	
	91301	91384		92075	92140		90047	90304	91343	91607	
	91301	91387		92078	92145		90048	90305	91344	91608	

Table 92. ZIP Codes in the Valley Node, by Season

Valley				
February		April	July	October
95202	95638	93202	93602	96001
95203	95641	93212	93609	96002
95204	95690	93221	93611	96003
95205		93223	93612	96007
95206		93230	93614	96008
95207		93234	93616	96019
95209		93235	93625	96022
95210		93239	93626	96033
95211		93242	93630	96047
95212		93245	93631	96051
95215		93247	93637	96059
95219		93266	93638	96062
95220		93267	93645	96069
95230		93272	93648	96073
95231		93274	93650	96080
95236		93277	93651	96087
95237		93286	93652	96088
95240		93291	93654	96096
95242		93292	93657	
95258		93609	93662	
95304		93615	93667	
95320		93616	93701	
95330		93618	93702	
95336		93625	93703	
95337		93631	93704	
95350		93646	93705	
95351		93647	93706	
95354		93648	93710	
95355		93652	93711	
95356		93654	93720	
95358		93656	93721	
95361		93662	93722	
95366		93706	93725	
95367		93725	93726	
95368		93727	93727	
95376			93728	
95377			93740	
95385			93741	
95391				
95615				
95632				
95632				

List of Eligible Multi-Family Sites

The multi-family sites were recruited and samples were collected and sorted using the same methods as for businesses; however, the nodes used for the multi-family recruitment differed from the business nodes. Multi-family waste characterization for this study overlapped with CalRecycle's disposal facility-based study, which used a different set of facilities for waste sampling. Those disposal facilities were used as nodes for multi-family sampling. The steps to acquire a list of multi-family sites were to:

Map a circle with a 30-mile radius around each selected multi-family node.

Determine which cities were wholly or substantially within the node circle.

Develop a list of all multi-family sites within the included cities using an online Yellow Pages search.

Randomize the list order and assign each multi-family site a unique ID number. Then, import the organized generator information into the recruitment database.

Recruitment Process

The two-step process for recruiting commercial and multi-family generators is detailed below.

Step 1. Initial Recruitment

Project staff telephoned generators in the recruitment database to determine their eligibility and willingness to participate in the study. The recruiter attempted to speak with a manager or supervisor who could give permission for the site to participate in the study. The recruiter introduced the study concepts and described the study as consisting of two parts: (1) a telephone interview and (2) up to two site visits to measure disposal and diversion, obtain samples of the site's waste and recycling, and gather further site and additional diversion information. If the contact refused either of these parts, the recruiter removed the site from eligibility for the study. Cascadia staff assured each recruited business that findings would be recorded anonymously and that business identities would not be divulged to any parties outside of the core project team.

After a site agreed to participate in the study, the recruiter further determined eligibility by asking additional questions to ensure that the generator belonged to the targeted industry group, that there were no logistical barriers to sampling and data collection, and that the generator's waste stream was collected separately from that of other neighboring generators. If a business did not meet these broad criteria, or if it could not provide the information that would determine if it met these criteria, we did not include it in the study.

If the recruiter needed to discard a potential site for any reason, the next business on the list for that industry group was contacted. A recruiter could follow up with a business up to three times before rejecting that business from the study. Recruitment for each industry group continued until recruitment goals were met. An example recruitment call sheet is included in Appendix D: Field Forms.

Step 2. Follow-up Data Collection

After each generator had been confirmed as eligible and willing to participate, we conducted follow-up calls to collect additional information that was used to (1) determine how to arrange and conduct visits for data collection purposes, (2) quantify and characterize disposal and diversion, and (3) correlate disposal and diversion information with other information about the generator (such as number of employees, participation in recycling programs, number of visitors, etc.). The following information was collected.

General Information

- Name and physical address of the company/organization
- Names and contact information for the person(s) who could grant permission for participation in the study, the person(s) who could supply data related to waste disposal practices and quantities, and the person(s) who could assist directly with on-site measurement and sampling visits
- A general description of the nature of the business if it was not easily determined by the business name (e.g., if it was in the electronics industry, was it a manufacturer or a wholesaler?)

Analytical Information

- Hours and days during which waste and recycling were generated (sometimes different than business hours)
- Number of distinct material streams at the location
- Numbers, locations, and approximate sizes of containers for waste
- Days and times of scheduled waste and recycling service
- Times or ranges of time when waste was taken to dumpsters
- Name and contact information for all hauling companies that serve the location
- Characterization and quantification of disposal and diversion activities, to the extent that this could be determined over the phone
- Number of employees expressed as Full Time Equivalents (FTE) and total employees
- Tonnage information for businesses with compactors or roll-off containers for disposed waste
- Awareness regarding California's Mandatory Commercial Recycling (MCR) law

Logistical Information

- Hours during which it was possible for our team to schedule data collection visits
- Layout of the site (including a map if the location was large enough to merit it)

- Specific places to visit on-site in order to observe, quantify, and characterize waste
- Specific procedures for accessing the waste, gaining assistance, taking measurements, taking samples, etc.

Recruiters used the following approaches to facilitate the efficient collection of accurate diversion information.

- Using a list of typical material diversion activities to prompt discussions with personnel at generator sites. The recruitment form included a list of recycling and/or composting activities typical for business and multi-family sites as prompts to gather information about diversion at each site.
- Contacting headquarters of chain stores when local branches do not maintain recycling and diversion records. If an individual chain store had an existing recycling program but did not maintain information about its program at the individual store location, we contacted the chain headquarters and requested the information for the individual store.
- During follow-up calls, Cascadia staff again assured each business that all study data would be recorded anonymously and that business identities would not be divulged to any parties outside of the core project team. An example Business Recruitment Form is included in Appendix D: Field Forms.

Cascadia's in-office staff recorded all recruitment data in the recruitment database. Appendix D: Field Forms includes screenshots of the recruitment database.

Task 3 and Task 4 Participation

The project team randomly selected 400 businesses and 30 multi-family sites with diversion activities for Task 4 from within the list of 800 businesses and 50 multi-family sites recruited for the study. These were not additional generators; they were a subset of the generators recruited to participate in the study. To select businesses for participation in Task 4, Cascadia organized recruited businesses into lists by industry group and region. Then, the project team randomized the lists and selected generators from each of these lists, starting at the top of each list and moving down until the sampling allocation within industry groups and regions were achieved. To select multi-family generators to meet Task 4 regional sampling allocations, Cascadia randomly selected six Task 2 multi-family sites from within each region.

One of the study objectives was to quantify total generation in each industry group by combining the Task 4 diversion data with the disposal data collection in Task 2. To avoid overestimating the diversion quantities for a group, generators with zero diversion (when randomly selected) were included in Task 4. We essentially treated these sites as generators with empty diversion containers. *This means a generator site selected for Task 4 may not have had any diversion*. If a business with zero diversion was randomly selected to participate in Task 4, it was included in the analysis but did not count toward the Task 4 recruitment target. Task 4 selection continued until 400 businesses with

diversion had been selected. This means the diversion composition and quantity calculations for some groups are based on more than 25 sites.

Task 3 was simply a separate analysis of only the *commercially collected* (i.e., by a commercial hauler or recycler) diversion samples from sites selected to participate in Task 4. To select sites for the Task 3 analysis, Cascadia filtered the list of Task 4 sites to include only generators with commercial source-separated recycling and/or organics collection service. Samples were distributed to reflect the overall statewide commercial sector based on employment by industry group and region. If the Task 3 allocations could not be met using the list of filtered Task 4 sites, we randomly selected additional generators from the list of Task 2 recruited sites and characterized their commercially collected diversion until we reached the required allocation of 230 sites.

Generator Site Recruitment Quality Assurance/Quality Control

The purpose of QA/QC measures during business recruitment was to ensure that recruiters collect and communicate accurate information during recruitment so that data collection activities could proceed according to plan. After a business was initially recruited to participate in the study, Cascadia staff conducted follow-up calls to confirm the generator information that recruiters collected. We noted all of the required information on a separate form for later entry into the recruitment database. In our communications with businesses, Cascadia ensured that we were speaking to the individuals who were authorized to grant permission for data and sample collection and, if necessary, any other individuals associated with the site who were empowered and able to provide accurate information about the site's operations, waste service levels, and other relevant disposal information.

Field Sampling/Sorting

This section provides a detailed description of the fieldwork processes for the three tasks, including: scheduling site visits, collecting samples, and sorting samples.

General Design Elements

For disposal sampling, a four-member crew—one crew manager and up to three field crew members—collected and sorted samples. For diversion sampling, two crews—each consisting of a crew manager and a field crew member—collected and sorted samples. Each sampling crew was responsible for:

- Coordinating with the generator sites and nodes.
- Collecting waste, recycling, or organics samples as appropriate for the task.
- Collecting information to determine disposal rate or diversion rate data.
- Confirming the information collected during business recruitment.

The crew manager for each team tracked actual samples collected and sorted against targets. The crew manager also consistently checked the data sheets for errors or missing data that could be corrected in the field.

Sampling Schedule

Sampling was planned to take place over approximately six weeks in each of four seasons. Season 1 was planned to begin in early February, Season 2 in April, Season 3 in July, and Season 4 in early October.

Field Crew Training and Supervision

Prior to the commencement of sorting activities for each task, our entire field crew underwent training to learn the material types and sorting protocols for this study. This training also covered Cascadia's Health and Safety Plan, which is updated whenever new safety information, products, or regulations that apply to a project become available. The crew managers were responsible for implementing and maintaining safe working practices in their work areas and for answering worker questions about the Health and Safety Plan. For detailed health and safety measures, refer to Appendix H: Health and Safety Plan.

Scheduling Site Visits

During the recruitment process, the recruiter documented all steps necessary for the field crews to visit the generator sites, access containers, and obtain a representative sample from each targeted stream. These steps specified where the crews should obtain each sample, how the crew could overcome any barriers to sampling (such as locked gates, closed facilities, locked dumpsters, and enclosed compactors), permissible time windows when the crews could obtain a representative sample from the site, and contact information for a person on-site who could assist with the sample collection process.

Recruiters considered several factors when suggesting an optimal time for a sampling visit: waste collection schedules, when the business takes the waste to the container(s), the hours of waste generation at the business, and the times when the container was accessible. We attempted to schedule site visits after an adequate time had passed since the last waste collection, but not so close to the next collection as to risk arriving just after a pick-up. The field crews scheduled a specific day and time for each visit if requested by the site. Otherwise, the field crew collected samples and completed site visits on a schedule that maximized both their efficiency and the quantity of waste at the site.

The following examples illustrate the considerations that went into timing an audit visit that involved measuring the amount of material in dumpsters. Separate considerations were given to each stream at each generator site.

SCENARIO 1:

Trash taken to dumpster:	Continuously, 6 a.m. to 5 p.m.
Trash pick-up schedule:	Monday, Wednesday, Friday at 6 a.m.
Hours the dumpster was accessible:	8 a.m. to 5 p.m.

In this scenario, the recruiter would have concluded that the appropriate window for measurement was Tuesday or Thursday late afternoon, between 3pm and 5pm.

SCENARIO 2:

Trash taken to dumpster:	Every night at 10 p.m.
Trash pick-up schedule:	Monday, Wednesday, Friday at 6 a.m.
Hours the dumpster was accessible:	8 a.m. to 5 p.m.

In this scenario, the recruiter would have attempted to have the business take their trash out earlier on the day in question, and assigned the observed amount of trash to the number of hours that the business had been in operation since the last collection.

SCENARIO 3:

Trash taken to dumpster:	5 p.m. every day
Trash pick-up schedule:	Every Wednesday morning
Hours the dumpster was accessible:	8 a.m. to 5 p.m.

In this scenario, it would have been acceptable to record the amount of waste in the dumpster on Sunday, Monday, or Tuesday while noting whether the measurement included waste taken to the dumpster on the measurement day or not.

SCENARIO 4:

Trash taken to dumpster:	Continuously, 6 a.m. to 11 p.m.
Trash pick-up schedule:	Every day at 10 a.m. and 4 p.m.
Hours the dumpster was accessible:	8 a.m. to 11 p.m.

In this scenario, it would have been necessary to take the waste disposal measurements shortly before one of the two pick-ups on any given day.

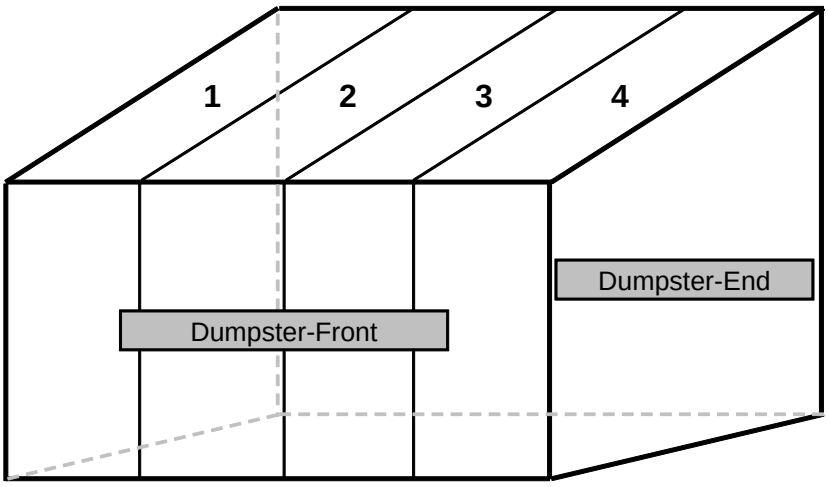
Sample Collection

The field crew manager visited each selected site to quantify disposal and diversion. For Task 2, the manager also collected one or more samples of disposed waste for transportation to the local node, where the field crew sorted the sample. Diversion samples were sorted at the generator site and returned to the diversion containers after sorting. The field crew collected disposal and diversion samples using the following procedure.

At participating sites with multiple containers from the same stream, staff randomly selected a single container for sampling to represent the site's stream. In cases where there were two or more distinct streams at a site, field crew randomly selected one waste container to sample for each stream.

The field crew randomly chose as a sample a vertical cross section, or "slice," of material from the selected container. Each sample consisted of all material in the slice, from the top to the bottom of the container. An illustration of the slices is shown in Figure 74. For garbage samples, the field crew ensured that each sample weighed at least 200 pounds. In cases where all of the material in the dumpster was less than 200 pounds, field crew drew waste from other containers in the same waste stream until they met the 200-pound sample requirement. In cases in which a business had less than 200 pounds available at the time of the visit, the sample crew collected all material available and returned later in the field season to collect the quantity of material needed to reach the 200-pound target. For diversion samples, the field crew collected all material in all containers for each stream, up to 125 pounds per stream. In cases in which all of the material for a stream was less than 125 pounds and the visit approximately coincided with the optimal sampling period, the sample was considered complete. In cases where all of the material for a stream was less than 125 pounds and the visit did not approximately coincide with the optimal sampling period, the field crew made one additional visit later in the field season to collect additional material.

Figure 74. Example Dumpster with Slices Illustrated



In cases where the material was inaccessible, unique arrangements were required for the sample collection to proceed. For example, if the site used a compactor, the team provided rolling carts for the businesses to deposit material into for one or more days rather than the compactor. The field crew then took material that accumulated in the rolling containers as the sample.

For garbage samples, the field crew contained the collected sample to prevent cross-contamination with other samples, labeled the sample with relevant details about its source using a sample placard, and transported the sample to the local node.

Collect Disposal Quantity Information

While on-site at each business, the field crew recorded the volume of waste in each container. We used this information to calculate annual disposed waste tonnage for each business and extrapolate these results to each industry group. The procedure for measuring waste during the site visit is described below. The field crew recorded this information on paper forms for later entry into the centralized generator database.

Disposed Waste Volume Measurements: The field crew recorded the length, width, and height to the nearest inch for all disposed waste at each site. The volume of the disposed waste at each site was the sum of all volumes for each waste container (if there was more than one container on-site), in cubic inches.

Disposed Waste Accumulation Time: During initial recruitment screening calls, recruiters asked the responsible party at the site for information to determine waste accumulation time, including the business operating hours, the time the waste containers were last collected by the hauler (or regular collection schedule), and when trash was regularly taken outside to dumpsters. While on-site, the field crew verified this critical information.

Collect Diversion Quantity Information

While on-site, the field crew collected information about the amount of materials collected in recycling and composting containers. We used this as well as other information to calculate annual recycling and diversion quantities for each business. The procedure for measuring materials during the site visit is described below. The field crew recorded this information on paper forms for later entry into the centralized recruitment database.

Diverted Material Volume Measurements: The field crew recorded the length, width, and height to the nearest inch for all recyclable and compostable materials disposed in containers at each site. The volume of the diverted material at each site was the sum of all volumes for each container (if there was more than one container on-site), in cubic inches.

Diverted Material Accumulation Time: During initial recruitment screening calls, recruiters asked the responsible party at the site for information to determine diverted material accumulation time, including the business operating hours, the time the containers were last collected by the hauler (or regular collection schedule), and

when material was regularly taken to outside containers. While on-site, the field crew verified this critical information.

Confirm Additional Diversion Practices

The field crew confirmed data for the additional diversion practices (such as back-hauling, self-hauling, source reduction, and reuse) during the same visit where they sampled, sorted, and quantified the diversion streams collected in commercially hauled containers.

The recruitment staff collected information about the site's existing recycling, composting, and other diversion practices that the field crew reviewed before they arrived at the site for the diversion assessment. At each site, the field crew manager met with key personnel to discuss existing recycling, composting, or other diversion practices, and to document missing data not collected by the recruiters. The intent of these meetings was to verify quantity data and other information about diversion activities that the sampling and sorting of materials collected on-site did not capture.

Sorting Procedures

The sorting process for garbage and diversion samples was the same except that samples from each task were sorted in different locations. Business garbage samples were transported for sorting and disposal to the local node. Multi-family garbage samples were sorted following the same protocol, but were collected and sorted as part of the accompanying disposal facility-based study, rather than this study. For diversion samples, the field crew sorted the samples on-site at each business or multi-family site.

After selecting and measuring the volume of each sample, the field crew sorted each sample using the following procedure.

Photograph the sample. The field crew placed the sample on a tarp. Using a digital camera, the crew manager took a photograph of the sample. A sample placard that identifies each sample was positioned so it was visible in each photograph.

Sort the sample. The field crew sorted samples by material types into plastic laundry baskets. The field crew members typically specialize in groups of materials, such as papers or plastics, and focus on sorting those materials from the rest of the sample. The field crew manager monitored the homogeneity of the component baskets as they accumulated, rejecting materials that were improperly classified. Open laundry baskets allowed the manager to see the material at all times. The material list that the field crew used to guide this sorting is presented in Appendix B: Material Definitions.

In general, material that was clean and dry or that was lightly contaminated was sorted into its material category. For example, damp cardboard was sorted as *uncoated corrugated cardboard* and a can of refried beans with a little left was sorted as *tin/steel cans – other*. Material that was substantially contaminated with other materials was sorted into the appropriate remainder/composite category.

For the Other Miscellaneous Paper and Remainder/Composite Paper types, the compostable portions were sorted separately. For example, items made entirely of paper that were sorted into remainder/composite paper that were substantially contaminated with moisture or food were put into *remainder/composite paper – compostable*, such as cardboard trays used for cakes that have a lot of food left on them. Paper items substantially contaminated with other things not desirable for composting (such as motor oil or paint) went into *remainder/composite paper – other*.

Weigh and record data. After each sample had been completely sorted, the field crew manager weighed the material in each category. The manager verified the purity of each component as it was weighed, before recording the weight. After verifying purity, the manager recorded the weights on paper field forms. The sample weight equaled the sum of the weights of all the sorted components.

For all sites included in the Task 3 analysis, both the disposed material stream samples and the commercially collected diverted material stream samples were sorted to a more detailed list. While the field crew sorted the samples from these generators into the materials listed in Appendix B: Material Definitions, they further sorted 20 of the material types into three subtypes: clean, bin-contaminated, or source-contaminated. The 20 materials included in the more detailed sort are listed in Table 93. This list corresponds to that used in the contamination subsort in CalRecycle's *California 2008 Statewide Waste Characterization Study.*

Table 93. Materials Included in the Contamination Subsort

Paper	Metal
Uncoated Corrugated Cardboard	Tin/Steel Cans - CRV Bimetal Containers
Paper Bags	Tin/Steel Cans - Other
Newspaper	Aluminum Cans - CRV
White Ledger	Aluminum Cans - Non-CRV
Other Office Paper	**Plastic**
Other Miscellaneous Paper - Compostable	PETE Containers - CRV
Other Miscellaneous Paper - Other	PETE Containers - Non-CRV
Remainder/Composite Paper - Rigid Food and Beverage Cartons	HDPE Containers - CRV
Remainder/Composite Paper - Compostable	HDPE Containers - Non-CRV
Remainder/Composite Paper - Other	Miscellaneous Plastic Containers (#3-&7) - CRV
	Miscellaneous Plastic Containers (#3-&7) - Non-CRV

The definition for each contamination category is included at Appendix B: Material Definitions. The contamination subsort was intended to provide CalRecycle with the information necessary to evaluate actual and potential diversion that occurs through bin-based source separation activities.

The sorting crew thoroughly cleaned the sorting area at the end of each sampling and sorting event.

Contingency Measures

We included general contingency plans to address unforeseen circumstances that we anticipated could arise over the course of this study. Though our study design included

comprehensive measures to avoid delays or mishaps, we acknowledged the inevitability of such occurrences and planned contingency measures accordingly. These measures included the following:

Over-recruitment of business and multi-family sites. Initially we over-recruited businesses by 10 percent to accommodate for any recruited businesses that might drop out of the study after agreeing to participate. We also recruited one extra multi-family site for each geographical region, in the event that something prevented the capture of valid waste samples at the intended multi-family location.

Ideally, complete and high-quality data for both composition and waste quantity would be obtained for each site visited. This is not always the case. During the course of the study, data from each site was tracked and assessed for completeness and quality. In some cases, the composition data for a site could be good but the quantity data was incomplete (i.e., a representative sample meeting minimum weight requirements was collected and sorted, but the overall quantity of materials could not be estimated with confidence). In this case, the site counted toward the recruitment goal, the composition data was included in the composition calculations, and the quantity data was not used. If the quantity data was good but the composition data was incomplete (i.e., the quantity of materials in the desired stream could be estimated with confidence but a representative composition sample could not be obtained and sorted), the site did not count toward the goal, the quantity data was included in the quantity calculations, the composition data was not used, and an additional site was recruited to make up for the missing composition data. This process was repeated until the recruitment goals were met.

Plan for repeat visits to meet sample weight goals. If the field crew arrived to collect a sample and there was not enough material on-site to meet the minimum garbage sample weight of 200 pounds, we collected the garbage material available that day and planned to make an additional visit to complete the sample. Originally the field crew made repeat visits to the site in question until they achieved the minimum sample weight. As fieldwork progressed, a limit of two site visits in areas with fewer sampling sites, and three visits in larger areas, was adopted to maintain field efficiencies. Sampling crews were in smaller areas for shorter periods and therefore had smaller windows of time to accomplish sampling.

Data Forms

Cascadia developed data collection forms specifically for this study. Examples of each of these forms are provided in Appendix D: Field Forms.

Site Visit (Bin Data) Forms were created to collect the site visit data for each generator site.

Sample Placards were created to identify samples after transportation from the generator site (for garbage samples) and to identify samples in pictures. The sample placards were brightly colored paper signs with the sample number pre-printed on the front.

Material Weight Tally Sheets were created to record the material weights for each sample.

Sample Tracking Forms were created to track the progress the field crews were making toward the sampling goals.

The data forms and database were developed prior to the start of sampling to ensure accuracy, consistency among forms, and efficient recording of data.

Approach to Coordination

Due to the complex nature of each task in this study, we communicated with generators, haulers, and sort facilities to ensure we had all the information needed to complete the study effectively as well as keep all parties apprised of the collection and sampling activities. The approaches to coordination for each task are detailed below.

Pre-Field Sampling Planning and Coordination

Prior to fieldwork, we prepared this study design that covers all three tasks. The design incorporates the fieldwork schedule as well as targeted numbers of samples, a plan for collecting and sorting samples, a description of how fieldwork was coordinated with all affected parties, methods and protocols for characterizing samples, health and safety measures, and general contingency measures.

Coordination with Selected Sorting Sites, Haulers, and Generators

Cascadia contacted each selected sorting facility the week before and the day prior to each sorting event, and asked facility representatives to notify their staff of each sorting event. Upon arrival and prior to departing the node, the sorting crew checked in with the designated facility contact. The crew remained in communication with facility staff, such as loader drivers working in or near the sorting area, throughout their time at each site.

Once all generators had been recruited for a sampling season, a list of haulers and recyclers that serve these generators was provided to CalRecycle staff who then sent an informational letter to each hauler. An example letter can be found in Appendix D: Field Forms. Cascadia called affected haulers the week before the sampling began to remind the haulers of the upcoming sampling activities.

Cascadia called each scheduled business the week before sampling in their region began to remind the business that they had agreed to participate and to schedule a specific day and time for each visit if requested by the site.

Data Management Plan

This section describes the processes Cascadia used to manage and analyze the data collected in this study. The Cascadia team performed all data entry and analysis in a manner that was consistent with and comparable to past research efforts using data management tools that were compatible with CalRecycle's approved protocols.

Quality Assessment/Quality Control

Throughout every step of every task, the Cascadia team implemented sound quality control practices to ensure consistency, comparability, and accuracy of data. Our quality control measures were comprehensive and designed to provide multiple checks of the data collection and data entry processes.

Our highly experienced QA/QC manager directed and oversaw data entry and analysis across all research efforts and provided overall quality control for all work products and deliverables. Errors or discrepancies in data discovered during quality control were investigated, resolved (including additional sampling if necessary), and communicated to field team members to inform field supervision and data collection processes.

Sorting and Quantification Data

For data collected during the sorting of each sample, the field crew manager reviewed the field forms every day and rectified any errors while the day's work was fresh in their mind. After reviewing the forms in the field, the field crew manager made copies of the forms and shipped the copies to Cascadia's home office for entry into a database. In-office staff performed random spot checks of the data entered into the database to ensure the accuracy of the data entry process.

For all other on-site data collection, including the quantification of disposal and diversion, the field crew reviewed their notes immediately upon completion of data collection and, if necessary, contacted the generator to ask any questions or clarify inconsistent information. Furthermore, if the generator did not have information available on-site, such as recycling invoices or receipts, the recruiter followed up with a phone call in one week to obtain the data. The field crew manager made copies of the forms produced, and the copies were shipped to Cascadia's office for entry into a database.

Data Entry

Cascadia designed a customized data entry and analysis database for all field data. The database was designed with built-in safeguards to reduce the chance of errors. For example, each entry field only accepted data values that lie within appropriate ranges. The entry fields also required staff to enter all data twice, and automatically compared the entries, flagging any entries that do not match.

After each week of work, the field crew delivered all field forms to Cascadia's office for high-level review (to ensure that all fields were filled in, all field forms were accounted for, the necessary data was collected in each field, etc.). Any anomalies discovered during this step were reviewed and clarified with the field crew manager and/or the site. After review, the project team entered the data into the customized database. Cascadia's QA/QC manager inspected the entered data and resolved any anomalous data points (outliers) against the hand-written field forms and sample photos.

Analysis

The methods and calculations for calculating means and descriptive statistics generally replicated those used in the previous CalRecycle generator studies from 1999 and 2006. Refer to Appendix C: Description of Calculations for detailed methods and calculations.

The Task 3 analysis included only the commercially collected diversion at the subset of sites selected for participation in the analysis. The Task 3 analysis excluded sites reporting substantial scavenging.

Appendix B: Material Definitions

Mapping the Material Types to the Compact List Used for Reporting

The field crew sorted samples into 82 unique material types. The detailed composition tables presented in the main body of the report aggregate those 82 materials into a compact list of 68 material types designed to focus on the divertible materials. Table 94 illustrates how the complete list of 82 materials was aggregated into the list of 68 materials. Composition tables containing data for all 82 types are found in Appendix E: Detailed Composition Tables.

Materials noted with an asterisk were included in a special contamination subsort. See Table 92 and Appendix A: Detailed Methodology for further information.

Table 94: Comparison between the 2014 Standard List and 2014 Expanded List

Material Type	2014 Compact Material List	2014 Expanded Material List
Paper	Uncoated Corrugated Cardboard	Uncoated Corrugated Cardboard
	Paper Bags	Paper Bags
	Newspaper	Newspaper
	White Ledger Paper	White Ledger Paper
	Other Office Paper	Other Office Paper
	Magazines and Catalogs	Magazines and Catalogs
	Phone Books and Directories	Phone Books and Directories
	Other Miscellaneous Paper - Compostable	Other Miscellaneous Paper - Compostable
	Other Miscellaneous Paper - Other	Other Miscellaneous Paper - Other
	Remainder/Composite Paper - Compostable	Remainder/Composite Paper - Compostable
	Remainder/Composite Paper - Other	Remainder/Composite Paper - Rigid Food and Beverage Cartons Remainder/Composite Paper - Other
Glass	Clear Glass Bottles and Containers	Clear Glass Bottles and Containers - CRV Clear Glass Bottles and Containers - Non-CRV
	Green Glass Bottles and Containers	Green Glass Bottles and Containers - CRV Green Glass Bottles and Containers - Non-CRV
	Brown Glass Bottles and Containers	Brown Glass Bottles and Containers - CRV Brown Glass Bottles and Containers - Non-CRV
	Other Colored Glass Bottles and Containers	Other Colored Glass Bottles and Containers - CRV Other Colored Glass Bottles and Containers - Non-CRV
	Flat Glass	Flat Glass
	Remainder/Composite Glass	Remainder/Composite Glass
Metal	Tin/Steel Cans	Tin/Steel Cans - CRV Bimetal Containers Tin/Steel Cans - Other
	Major Appliances	Major Appliances
	Used Oil Filters	Used Oil Filters
	Other Ferrous Metal	Other Ferrous Metal
	Aluminum Cans	Aluminum Cans - CRV Aluminum Cans - Non-CRV
	Other Non-Ferrous Metal	Other Non-Ferrous Metal
	Remainder/Composite Metal	Remainder/Composite Metal

Material Type	2014 Compact Material List	2014 Expanded Material List
Electronics	Brown Goods	Brown Goods
	Computer-Related Electronics	Computer-Related Electronics
	Other Small Consumer Electronics	Other Small Consumer Electronics
	Video Display Devices	Video Display Devices - CRT Video Display Devices - Other
Plastic	PETE Containers	PETE Containers - CRV PETE Containers - Non-CRV
	HDPE Containers	HDPE Containers - CRV HDPE Containers - Non-CRV
	Miscellaneous Plastic Containers	Miscellaneous Plastic Containers - CRV Miscellaneous Plastic Containers - Non-CRV
	Plastic Trash Bags	Plastic Trash Bags
	Plastic Grocery and Other Merchandise Bags	Plastic Grocery and Other Merchandise Bags
	Non-Bag Commercial and Industrial Packaging Film	Non-Bag Commercial and Industrial Packaging Film
	Film Products	Film Products
	Other Film	Other Film - Flexible Plastic Pouches Other Film - Other
	Durable Plastic Items - #2-#5 Bulky Rigids	Durable Plastic Items - #2-#5 Bulky Rigids
	Durable Plastic Items	Durable Plastic Items - Other
	Remainder/Composite Plastic	Remainder/Composite Plastic
Other Organic	Food	Food
	Leaves and Grass	Leaves and Grass
	Prunings and Trimmings	Prunings and Trimmings
	Branches and Stumps	Branches and Stumps
	Manures	Manures
	Textiles	Textiles
	Carpet	Carpet
	Remainder/Composite Organic	Remainder/Composite Organic
Inerts and Other	Concrete	Concrete
	Asphalt Paving	Asphalt Paving
	Asphalt Roofing	Asphalt Roofing
	Clean Dimensional Lumber	Clean Dimensional Lumber
	Clean Engineered Wood	Clean Engineered Wood
	Clean Pallets and Crates	Clean Pallets and Crates
	Other Wood Waste	Other Wood Waste
	Gypsum Board	Gypsum Board
	Rock, Soil and Fines	Rock, Soil and Fines
	Remainder/Composite Inerts and Other	Remainder/Composite Inerts and Other

Material Type	2014 Compact Material List	2014 Expanded Material List
Household Hazardous	Paint	Paint
	Vehicle & Equipment Fluids	Vehicle & Equipment Fluids
	Used Oil	Used Oil
	Batteries	Batteries
	Remainder/Composite Household Hazardous	Mercury-containing Items - Not Lamps Lamps - Fluorescent and LED Remainder/Composite Household Hazardous
Special Waste	Ash	Ash
	Treated Medical Waste	Treated Medical Waste
	Bulky Items	Bulky Items
	Tires	Tires
	Remainder/Composite Special Waste	Remainder/Composite Special Waste
Mixed Residue	Mixed Residue	Mixed Residue

Material Definitions

Materials noted with an asterisk were included in the contamination subsorts.

Paper

1. **Uncoated Corrugated Cardboard*** means a paper laminate usually composed of 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 boxes such as cereal and tissue boxes. This type does include very clean (no food residue and only lightly stained) pizza boxes.
2. **Paper Bags*** means bags and sheets made from kraft paper. The paper may be brown (unbleached) or white (bleached). Examples include paper grocery bags, clean fast food bags, department store bags, and heavyweight sheets of kraft packing paper.
3. **Newspaper*** means paper used in newspapers. Examples include newspaper and glossy inserts found in newspapers, and all items made from newsprint, such as free advertising guides, election guides, plain news packing paper, stapled college class schedules, and tax instruction booklets.

4. **White Ledger Paper*** means bleached, uncolored bond, rag, or stationery grade paper, without ground wood fibers. It may have colored ink on it. When the paper is torn, the fibers are white. Examples include white paper used in photocopiers and laser printers, and letter paper.
5. **Other Office Paper*** means paper used in offices other than white ledger paper. Examples include colored ledger, computer paper, manila folders, manila envelopes, index cards, white envelopes, white window envelopes, white or colored notebook paper, ground wood computer paper, junk mail, and carbonless forms.
6. **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, pamphlets, and glossy advertisements.
7. **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.
8. **Other Miscellaneous Paper - Compostable*** means items made mostly of paper that could be composted, that do not fit into any of the other paper types. Paper may be combined with minor amounts of other materials such as wax or glues. Examples include pulp paper egg cartons, unused pulp paper plant pots, molded paper packing materials, some berry trays, some take-out food containers, and dirty molded paper plates.
9. **Other Miscellaneous Paper - Other*** means items made mostly of paper that do not fit into any of the other paper types, but that are generally recyclable or not generally composted. Paper may be combined with minor amounts of other materials such as wax or glues. This type includes items made of chipboard, ground wood paper, and deep-toned or fluorescent dyed paper. Examples include cereal and cracker boxes, paperboard boxes for software, unused paper plates and cups, goldenrod colored paper, school construction paper, butcher paper, ice cream cartons and other frozen food boxes, self-adhesive notes, and hard cover and paperback books.
10. **Remainder/Composite Paper - Rigid Food and Beverage Cartons*** means aseptic containers (multi-layered packaging that contains shelf-stable food products such as apple juice, soup, soy/rice milk, etc.) and “gable top” cartons (non-refrigerated items such as granola and crackers; refrigerated items such as milk, juice, egg substitutes, etc.). Rigid food and beverage cartons are usually paper-based, may be any shape, and may include a plastic pour spout as part of the carton.
11. **Remainder/Composite Paper - Compostable*** means items made mostly of paper, that don’t fit into any other material types, that are combined or contaminated with large amounts of other materials such as wax, food, and

moisture, that are compostable. Examples include waxed corrugated cardboard, waxed paper, napkins, tissue, paper towels, fast food wrappers, food-soiled paper and moisture-soiled paper, all pizza boxes (unless at least 95 percent clean), and shredded paper.

12. **Remainder/Composite Paper - Other*** means items made mostly of paper but combined with large amounts of other materials. These are items that do not fit into any other categories, are not generally compostable or recyclable, and are not food and beverage cartons. Examples include blueprints, sepia, onion skin, carbon paper, photographs, paper frozen juice cans, sheets of paper stick-on labels, and paper mailing envelopes lined with bubble wrap or plastic.

Glass

13. **Clear Glass Bottles and Containers - CRV** means clear glass containers that display the CRV notification. Examples include whole or broken clear soda bottles and fruit juice bottles, and whole or broken clear wine cooler bottles.
14. **Clear Glass Bottles and Containers - Non-CRV** means clear glass containers that do not display the CRV notification. Examples include clear wine bottles, mayonnaise jars, and jam jars.
15. **Green Glass Bottles and Containers - CRV** means green-colored glass containers that display the CRV notification. Examples include whole or broken green soda and beer bottles.
16. **Green Glass Bottles and Containers - Non-CRV** means green-colored glass containers that do not display the CRV notification. Examples include green wine bottles.
17. **Brown Glass Bottles and Containers - CRV** means brown-colored glass containers that display the CRV notification. Examples include whole or broken brown beer bottles.
18. **Brown Glass Bottles and Containers - Non-CRV** means brown-colored glass containers that do not display the CRV notification. Examples include whole or broken brown wine bottles.
19. **Other Colored Glass Bottles and Containers - CRV** means other-colored glass containers that display the CRV notification. Examples include whole or broken blue soda and water bottles.
20. **Other Colored Glass Bottles and Containers - Non-CRV** means other-colored glass containers that do not display the CRV notification. Examples include whole or broken blue or other colored wine or liquor bottles and other containers.

21. **Flat Glass** means clear or tinted glass that is flat. Examples include glass window panes, doors and table tops, flat automotive window glass (side windows), safety glass, and architectural glass. This type does not include automotive windshields, laminated glass, or any curved glass.

22. **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, auto windshields, laminated glass, or any curved glass.

Metal

23. **Tin/Steel Cans - CRV Bimetal Containers*** means rigid containers that have steel sides and aluminum ends and that display the CRV notification. These cans are often used to store beverages.

24. **Tin/Steel Cans - Other*** means rigid containers made mainly of steel that are not CRV bimetal cans. These items will stick to a magnet and may be tin-coated. This subtype 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 non-CRV bimetal containers with steel sides and aluminum ends.

25. **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.

26. **Used Oil Filters** means metal oil filters used in motor vehicles and other engines, which contain a residue of used oil.

27. **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, and scrap ferrous items.

28. **Aluminum Cans - CRV*** means any food or beverage container that is made mainly of aluminum and that displays the CRV notification. Examples include most aluminum soda or beer cans. This subtype does not include bimetal containers with steel sides and aluminum ends.

29. **Aluminum Cans - Non-CRV*** means any food or beverage container that is made mainly of aluminum and that does not display the CRV notification. Examples include some pet food and meat cans.

30. **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.

31. **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 metal 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.

Electronics

32. **Brown Goods** means generally larger, non-portable electronic goods that have some circuitry. Examples include microwaves, stereos, VCRs, DVD players, large radios, and audio/visual equipment. Does not include items with video display devices.

33. **Computer-Related Electronics** means electronics with large circuitry that is computer-related, not including monitors. Examples include processors, keyboards, printers, fax machines, mice, disk drives, and modems.

34. **Other Small Consumer Electronics** means portable non-computer-related electronics with large circuitry. Examples include personal digital assistants (PDAs), cell phones (including those with a screen larger than 4 inches), phone systems, phone answering machines, portable electronic book readers (like Kindles and Nooks) and other devices for reading static text, computer games and other electronic toys, portable CD players, camcorders, digital cameras, cell phone chargers and other electronic device chargers, and other electronic devices.

35. **Video Display Devices - CRT** means items with video displays larger than 4 inches that contain a cathode ray tube (CRT). Examples include some televisions, computer monitors, and other items containing CRTs. The shape of the item is usually more boxy than flat.

36. **Video Display Devices - Other** means items with video displays larger than 4 inches that are not CRTs nor are they included in the Other Small Consumer Electronics category. Examples include some televisions, computer monitors, portable DVD players, tablet computers (like the iPad and Kindle Fire), and laptop computers. The shape of the item is usually more flat than boxy, and the device is primarily intended to display moving video, perform computing functions, or view web content.

Plastic

37. **PETE Containers - CRV*** means clear or colored PET containers that display the CRV notification. When marked for identification, it bears the number “1” in the center of the triangular recycling symbol and may also bear the letters

"PETE" or "PET." The color is usually transparent green or clear. A PET container usually has a small dot left from the manufacturing process, not a seam. It does not turn white when bent. Examples include soda and water bottles.

38. **PETE Containers - Non-CRV*** means clear or colored PET containers that do not display the CRV notification. When marked for identification, it bears the number "1" in the center of the triangular recycling symbol and may also bear the letters "PETE" or "PET." The color is usually transparent green or clear. A PET container usually has a small dot left from the manufacturing process, not a seam. It does not turn white when bent. Examples include non-CRV juice or water bottles, some liquor bottles, cooking oil containers, food jars, pastry jars, frozen food or other trays, clamshell packaging, and aspirin bottles.

39. **HDPE Containers - CRV*** means natural and colored HDPE containers that display the CRV notification. This plastic is usually either cloudy white, allowing light to pass through it (natural) or a solid color, preventing light from passing through it (colored). When marked for identification, it bears the number "2" in the triangular recycling symbol and may also bear the letters "HDPE." Examples include some small juice bottles.

40. **HDPE Containers - Non-CRV*** means natural and colored HDPE containers that do not display the CRV notification. This plastic is usually either cloudy white, allowing light to pass through it (natural) or a solid color, preventing light from passing through it (colored). When marked for identification, it bears the number "2" in the triangular recycling symbol and may also bear the letters "HDPE." Examples include milk jugs, detergent bottles, some hair-care bottles, some margarine and yogurt tubs, clamshell packaging, empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid containers.

41. **Miscellaneous Plastic Containers - CRV*** means plastic containers that display the CRV notification that are made of types of plastic other than HDPE or PET. Items may be made of PVC, PP, or PS or mixed resins. When marked for identification, these items may bear the number "3," "4," "5," "6," or "7" in the triangular recycling symbol. This subtype also includes plastic containers that do not have the triangular recycling symbol.

42. **Miscellaneous Plastic Containers - Non-CRV*** means plastic containers that do not display the CRV notification that are made of types of plastic other than HDPE or PET. Items may be made of PVC, PP, or PS. When marked for identification, these items may bear the number "3," "4," "5," "6," or "7" in the triangular recycling symbol. This subtype also includes plastic containers that do not have the triangular recycling symbol. Examples include hardware and fastener packaging, food containers such as bottles for salad dressings and vegetable oils, flexible and brittle yogurt cups, syrup bottles, margarine tubs, microwave food trays, and clamshell-shaped fast food containers. This type

also includes some shampoo containers, vitamin bottles, foam egg cartons, and clamshell-like muffin containers.

43. **Plastic Trash Bags** means plastic bags sold for use as trash bags, for both residential and commercial use. This type includes garbage, kitchen, compactor, can-liner, composting, yard, lawn, leaf, and recycling bags. This type does not include other plastic bags, such as shopping bags, that might have been used to contain trash.

44. **Plastic Grocery and Other Merchandise Bags** means plastic shopping bags used to contain merchandise to transport from the place of purchase, given out by the store with the purchase. This type includes dry cleaning bags intended for one-time use. Does not include produce bags.

45. **Non-Bag Commercial and Industrial Packaging Film** means film plastic used for large-scale packaging or transport packaging. Examples include shrink-wrap, mattress bags, furniture wrap, and film bubble wrap.

46. **Film Products** means plastic film used for purposes other than packaging. 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.

47. **Other Film - Flexible Plastic Pouches** means plastic pouches made of thicker, multi-layer flexible material. May have a flat bottom so that package would stand up on its own, but not always. Material is thicker than potato chip bags and frozen vegetable bags. Includes plastic coffee bags like Starbucks and Peet's; Capri Sun pouches; baby food pouches – may have plastic screw top; soup pouches; salad dressing pouches; wine pouches; backpacking meals in pouches; soap refill pouches; laundry detergent pouches; and other similar items.

Other Film - Flexible Plastic Pouches Examples	
INCLUDED – THICKER, MULTI-LAYER PACKAGING	**EXCLUDED – THINNER, SINGLE-LAYER PACKAGING**
Plastic coffee bags (Starbucks and Peet's) Juice pouches (Capri Sun) Baby food pouches – may have plastic screw top Soup pouches Salad dressing pouches Wine pouches Backpacking meals in pouches Soap refill pouches Laundry detergent pouches Other similar items	Potato chip bags and similar Candy wrappers Tortilla bags Frozen food bags (vegetables, berries) Nut/snack bags Shrink plastic wrappers (Slim Jim and string cheese wrappers) Ziplock bags intended for home use Thin produce bags as used in grocery stores Newspaper bags Bread bags Small (2 inch) pouches for condiments (mustard, relish, etc.) Yogurt tubes (Gogurt) Mailing pouches, usually colored or white (not clear) (LL Bean, medication pouches) 100% plastic mailing pouches with bubble wrap Other similar items

48. **Other Film – Other** means all other plastic film that does not fit into any other type, excluding flexible plastic pouches. 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, potato chip bags, mailing pouches, bank bags, X-ray film, metallized film (such as balloons), and plastic food wrap.

49. **Durable Plastic Items - #2 and #5 Bulky Rigids** means plastic items, other than containers or film plastic, that are large (generally larger than a soccer ball) rigid #2 HDPE or #5 PP plastic bulky items. These items are made to last for more than one use. These items usually bear the number 2 or 5 in the triangular recycling symbol. Examples include: crates, buckets (including 5-gallon buckets), baskets, totes, large plastic garbage cans, large tubs, large storage tubs/bins (usually with lids) that don't have sharp corners, flexible (non-brittle) flower pots of 1 gallon size or larger, lawn furniture, large plastic toys, tool boxes, first aid boxes, and some sporting goods.

50. **Durable Plastic Items - Other** means plastic items other than containers or film plastic that are often made to last for more than one use that are not large

rigid items made from #2 or #5 plastics. These items may bear the numbers 1 through 7 in the triangular recycling symbol. Examples include CDs and their cases, plastic housewares 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, and plastic pipes and fittings.

51. **Remainder/Composite Plastic** means plastic that cannot be put in any other type. These items 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, plastic cups, produce trays, foam meat and pastry trays, foam packing blocks, packing peanuts, cookie trays found in cookie packages, plastic strapping, plastic lids, some kitchen ware, some toys, foam plates/bowls, window blinds, plastic lumber, insulating foam, imitation ceramics, handles and knobs, plastic string (such as used for hay bales), plastic rigid bubble/foil packaging (as for medications), small (less than 1 gallon) plant containers such as nursery pots and plant six-packs, and new Formica, new vinyl, or new linoleum.

Other Organics

52. **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, eggshells, 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.

53. **Leaves and Grass** means plant material, except woody material, from any public or private landscape. Examples include leaves, grass clippings, plants, and seaweed. This type does not include woody material or material from agricultural sources.

54. **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, branches exceeding 4 inches in diameter, or material from agricultural sources.

55. **Branches and Stumps** means woody plant material, branches, and stumps that exceed 4 inches in diameter, from any public or private landscape.

56. **Manures** means manure and soiled bedding materials from large domestic, farm, or ranch animals. Examples include manure and soiled bedding from animal production operations, racetracks, riding stables, animal hospitals, and other sources. Does not include feces from small household pets such as dogs and cats.

57. **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.

58. **Carpet** means flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material. This type does not include carpet padding or woven rugs with no backing.

59. **Remainder/Composite Organic** means organic material that cannot be put in any other type. This type includes items made mostly of organic materials, but combined with other material types. Examples include leather items, cork, hemp rope, garden hoses, rubber items, hair, carpet padding, cigarette butts, diapers, feminine hygiene products, small wood products (such as Popsicle sticks and toothpicks), sawdust, agricultural crop residues, and animal feces from small household pets such as dogs and cats.

Inerts and Other

60. **Concrete** means a hard material made from sand, aggregate, gravel, cement mix, and water. Examples include pieces of building foundations, concrete paving, and concrete/cinder blocks. This category includes concrete with a steel internal structure composed of reinforcing bars (re-bar) or metal mesh.

61. **Asphalt Paving** means a black or brown, tar-like material mixed with aggregate used as a paving material.

62. **Asphalt Roofing** means composite shingles and other roofing material made with asphalt. Examples include asphalt shingles and attached roofing tar and tar paper.

63. **Clean Dimensional Lumber** means unpainted new or demolition dimensional lumber. Includes materials such as 2 x 4s, 2 x 6s, 2 x 12s, and other residual materials from framing and related construction activities. May contain nails or other trace contaminants.

64. **Clean Engineered Wood** means unpainted new or demolition scrap from sheeted goods such as plywood, particleboard, wafer board, oriented strand board, and other residual materials used for sheathing and related construction uses. May contain nails or other trace contaminants.

65. **Clean Pallets and Crates** means unpainted wood pallets, crates, and packaging made of lumber/engineered wood.

66. **Other Wood Waste** means wood waste that cannot be put into any other material type. This type may include untreated/unpainted scrap from production of prefabricated wood products such as wood furniture or cabinets, untreated or unpainted wood roofing and siding, painted or stained wood, and treated wood.

67. **Gypsum Board** means interior wall covering made of a sheet of gypsum sandwiched between paper layers. Examples include used or unused broken or whole sheets. Gypsum board may also be called sheetrock, drywall, plasterboard, gypboard, gyproc, or wallboard. Includes painted gypsum board.

68. **Rock, Soil and Fines** means rock pieces of any size and soil, dirt, and other matter. Examples include rock, stones, sand, clay, soil and other fines. This type also includes nonhazardous contaminated soil.

69. **Remainder/Composite Inerts and Other** means inerts and other material that cannot be put in any other type. This type may include items from different types 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, gypsum board, synthetic counter tops, fiber or composite acoustic ceiling tiles, and aluminum scrap.

Household Hazardous Waste (HHW)

70. **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.

71. **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.

72. **Used Oil** 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.

73. **Batteries** means any type of battery including both dry cell, rechargeable, and lead acid. Examples include car, flashlight, small appliance, watch, and hearing aid batteries.

74. **Mercury-Containing Items - Not Lamps** means items other than lamps that are readily identifiable as containing mercury such as thermostats and thermometers.

75. **Lamps - Fluorescent and LED** means both compact and tube-style fluorescent lights, and LED lights.

76. **Remainder/Composite Household Hazardous** 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 such as pesticides, caustic cleaners, sharps

(needles), medications, and nutritional supplements which, if improperly put in the solid waste stream, may present handling problems or other hazards.

Special Waste

77. **Ash** means a residue from the combustion of any solid or liquid material. Examples include ash from fireplaces, incinerators, biomass facilities, waste-to-energy facilities, and barbecues. This type also includes ash and burned debris from structure fires.

78. **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 Health and Safety Code.

79. **Bulky Items** means large hard-to-handle items that are not defined elsewhere in the material types list, including furniture, mattresses, and other large items. Examples include all sizes and types of furniture, box springs, and base components.

80. **Tires** means vehicle tires. Tires may be pneumatic or solid. Examples include tires from trucks, automobiles, motorcycles, heavy equipment, lawn mowers, and bicycles.

81. **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 (such as tubes, oxygen masks, and medical instruments), and artificial fireplace logs.

Mixed Residue

82. **Mixed Residue** means material that cannot be put in any other type or category. This category includes mixed residue that cannot be further sorted. Examples include clumping kitty litter, cosmetics, partially filled containers of non-food consumer products, and residual material from a material recovery facility or other sorting process that cannot be put in any other material type, including remainder/composite types.

Material Type Examples

Other Film - Flexible Plastic Pouches

Single25™ CarboPouch

6-Pack Carrier Case

Remainder/Composite Paper - Rigid Food and Beverage Cartons

Recoverability Groups

The 82 materials used for sorting are assigned to the five recoverability groups as shown in Table 95. The curbside recyclable list was based on research done by CalRecycle on materials listed as acceptable in local jurisdiction programs.

Table 95. Recoverability Group Assignments

Curbside Recyclable	Other Recyclable	Recoverable Inerts
Uncoated Corrugated Cardboard	Major Appliances	Concrete
Paper Bags	Used Oil Filters	Asphalt Paving
Newspaper	Other Ferrous	Asphalt Roofing
White Ledger Paper	Other Non-Ferrous	Gypsum Board
Other Office Paper	Computer-related Electronics	Rock, Soil and Fines
Magazines and Catalogs	Other Small Consumer Electronics	
Phone Books and Directories	Video Display Devices - CRT	**Other Materials**
Other Miscellaneous Paper - Other	Video Display Devices - Other	Remainder/Composite Paper - Rigid Food & Beverage Cartons
Clear Glass Bottles and Containers - CRV	Plastic Grocery and Other Merchandise Bags	Remainder/Composite Paper - Other
Clear Glass Bottles and Containers - Non-CRV	Non-Bag Commercial and Industrial Packaging Film	Flat Glass
Green Glass Bottles and Containers - CRV	Durable Plastic Items - #2 and #5 Bulky Rigids	Remainder/Composite Glass
Green Glass Bottles and Containers - Non-CRV	Textiles	Remainder/Composite Metal
Brown Glass Bottles and Containers - CRV	Carpet	Brown Goods
Brown Glass Bottles and Containers - Non-CRV	Paint	Plastic Trash Bags
Other Colored Glass Bottles and Containers - CRV	Vehicle and Equipment Fluids	Film Products
Other Colored Glass Bottles and Containers - Non-CRV	Used Oil	Other Film - Flexible Plastic Pouches
Tin/Steel Cans - CRV Bimetal Containers	Batteries	Other Film - Other
Tin/Steel Cans - Other	Tires	Durable Plastic Items - Other
Aluminum Cans - CRV		Remainder/Composite Plastic
Aluminum Cans - Non-CRV	**Compost/Mulch**	Remainder/Composite Organic
PETE Containers - CRV	Other Miscellaneous Paper - Compostable	Other Wood Waste
PETE Containers - Non-CRV	Remainder/Composite Paper - Compostable	Remainder/Composite Inerts and Other
HDPE Containers - CRV	Food	Mercury-Containing Items - Not Lamps
HDPE Containers - Non-CRV	Leaves and Grass	Lamps - Fluorescent and LED
Miscellaneous Plastic Containers - CRV	Prunings and Trimmings	Remainder/Composite Household Hazardous
Miscellaneous Plastic Containers - Non-CRV	Branches and Stumps	Ash
	Manures	Treated Medical Waste
	Clean Dimensional Lumber	Bulky Items
	Clean Engineered Wood	Remainder/Composite Special Waste
	Clean Pallets & Crates	Mixed Residue

The 126 materials used in the Task 3 analysis are assigned to the five recoverability groups as shown in Table 96. The curbside recyclable list was based on research done by CalRecycle on materials listed as acceptable in local jurisdiction programs.

Table 96. Recoverability Group Assignments for Task 3 Analysis

Curbside Recyclable	Other Recyclable	Recoverable Inerts
Uncoated Corrugated Cardboard - Clean	Plastic Grocery and Other Merchandise Bags	Concrete
Paper Bags - Clean	Non-Bag Commercial and Industrial Packaging Film	Asphalt Paving
Newspaper - Clean	Durable Plastic Items - #2 and #5 Bulky Rigids	Asphalt Roofing
White Ledger Paper - Clean	Major Appliances	Gypsum Board
Other Office Paper - Clean	Used Oil Filters	Rock, Soil and Fines
Magazines and Catalogs - Clean	Other Ferrous	
Phone Books and Directories - Clean	Other Non-Ferrous	**Other Materials**
Other Miscellaneous Paper - Other - Clean	Textiles	Remainder/Composite Paper - Rigid Food & Beverage Cartons - Clean
PETE Containers - CRV - Clean	Carpet	Remainder/Composite Paper - Rigid Food & Beverage Cartons - Bin Contaminated
PETE Containers - Non-CRV - Clean	Computer-related Electronics	Remainder/Composite Paper - Rigid Food & Beverage Cartons - Source Contaminated
HDPE Containers - CRV - Clean	Other Small Consumer Electronics	Remainder/Composite Paper - Other - Clean
HDPE Containers - Non-CRV - Clean	Video Display Devices - CRT	Remainder/Composite Paper - Other - Bin Contaminated
Miscellaneous Plastic Containers - CRV - Clean	Video Display Devices - Other	Remainder/Composite Paper - Other - Source Contaminated
Miscellaneous Plastic Containers - Non-CRV - Clean	Paint	PETE Containers - CRV - Bin Contaminated
Clear Glass Bottles and Containers - CRV	Vehicle and Equipment Fluids	PETE Containers - CRV - Source Contaminated
Clear Glass Bottles and Containers - Non-CRV	Used Oil	PETE Containers - Non-CRV - Bin Contaminated
Green Glass Bottles and Containers - CRV	Batteries	PETE Containers - Non-CRV - Source Contaminated
Green Glass Bottles and Containers - Non-CRV	Tires	HDPE Containers - CRV - Bin Contaminated
Brown Glass Bottles and Containers - CRV		HDPE Containers - CRV - Source Contaminated
Brown Glass Bottles and Containers - Non-CRV	**Compost/Mulch**	HDPE Containers - Non-CRV - Bin Contaminated
Other Colored Glass Bottles and Containers - CRV	Uncoated Corrugated Cardboard - Bin Contaminated	HDPE Containers - Non-CRV - Source Contaminated
Other Colored Glass Bottles and Containers - Non-CRV	Uncoated Corrugated Cardboard - Source Contaminated	Miscellaneous Plastic Containers - CRV - Bin Contaminated
Tin/Steel Cans - CRV Bimetal Containers - Clean	Paper Bags - Bin Contaminated	Miscellaneous Plastic Containers - CRV - Source Contaminated
Tin/Steel Cans - Other - Clean	Paper Bags - Source Contaminated	Miscellaneous Plastic Containers - Non-CRV - Bin Contaminated
Aluminum Cans - CRV - Clean	Newspaper - Bin Contaminated	Miscellaneous Plastic Containers - Non-CRV - Source Contaminated
Aluminum Cans - Non-CRV - Clean	Newspaper - Source Contaminated	Plastic Trash Bags
	White Ledger Paper - Bin Contaminated	Film Products
	White Ledger Paper - Source Contaminated	Other Film - Flexible Plastic Pouches
	Other Office Paper - Bin Contaminated	Other Film - Other
	Other Office Paper - Source Contaminated	Durable Plastic Items - Other
	Other Miscellaneous Paper - Compostable - Clean	Remainder/Composite Plastic
	Other Miscellaneous Paper - Compostable - Bin Contaminated	Flat Glass
	Other Miscellaneous Paper - Compostable - Source Contaminated	Remainder/Composite Glass
	Other Miscellaneous Paper - Other - Bin Contaminated	Tin/Steel Cans - CRV Bimetal Containers - Bin Contaminated
	Other Miscellaneous Paper - Other - Source Contaminated	Tin/Steel Cans - CRV Bimetal Containers - Source Contaminated
	Remainder/Composite Paper - Compostable - Clean	Tin/Steel Cans - Other - Bin Contaminated
	Remainder/Composite Paper - Compostable - Bin Contaminated	Tin/Steel Cans - Other - Source Contaminated
	Remainder/Composite Paper - Compostable - Source Contaminated	Aluminum Cans - CRV - Bin Contaminated
	Food	Aluminum Cans - CRV - Source Contaminated
	Leaves and Grass	Aluminum Cans - Non-CRV - Bin Contaminated
	Prunings and Trimmings	Aluminum Cans - Non-CRV - Source Contaminated
	Branches and Stumps	Remainder/Composite Metal
	Manures	Remainder/Composite Organic
	Clean Dimensional Lumber	Other Wood Waste
	Clean Pallets & Crates	Remainder/Composite Inerts and Other
	Clean Engineered Wood	Brown Goods
	Magazines and Catalogs - Bin Contaminated	Mercury-Containing Items - Not Lamps
	Magazines and Catalogs - Source Contaminated	Lamps - Fluorescent and LED
	Phone Books and Directories - Bin Contaminated	Remainder/Composite Household Hazardous
	Phone Books and Directories - Source Contaminated	Ash
		Treated Medical Waste
		Bulky Items
		Remainder/Composite Special Waste
		Mixed Residue

Contamination Subsort Definitions

The contamination categories were defined as follows:

Clean. Material not soiled or contaminated in the bin that could reasonably be expected to be recycled in recycling programs targeting the material without special processing, cleaning, and/or repair. For example, a clean plastic soda bottle, dry office paper, or a clean, dry, and still folded newspaper.

Figure 75. Clean Materials

Bin-Contaminated. Material that appears to have been contaminated after disposal. Typically these materials were contaminated with moisture or food, such as a newspaper wet from a leaked beverage, a plastic soda bottle covered with food on the outside, or a bottle or can covered in grass clippings.

Figure 76. Bin-Contaminated Materials

Source-Contaminated. Material that appears to have been contaminated through use or prior to disposal. For example, cardboard with a lot of tape, newspaper covered with paint used for masking, newspaper used to wrap fish, paper plates with food residue, or peanut butter jars with residue.

Figure 77. Source-Contaminated Materials

Material Groupings for Task 3 Analysis

Table 97 lists the standard recoverable materials for the Task 3 analysis. Materials marked with an X were considered recovered for the purposes of the analysis.

Table 97. Standard Recoverable Materials for Task 3 Analysis

	Curbside Recycle Bins			Curbside Organics Bins		
	Clean	Bin Contaminated	Source Contaminated	Clean	Bin Contaminated	Source Contaminated
Uncoated Corrugated Cardboard	X			X	X	X
Paper Bags	X			X	X	X
Newspaper	X			X	X	X
White Ledger Paper	X			X	X	X
Other Office Paper	X			X	X	X
Magazines and Catalogs	X			X	X	X
Phone Books and Directories	X			X	X	X
Other Miscellaneous Paper - Compostable				X	X	X
Other Miscellaneous Paper - Other	X			X	X	X
Remainder/Composite Paper - Compostable				X	X	X
Clear Glass Bottles and Containers - CRV	X					
Clear Glass Bottles and Containers - Non-CRV	X					
Green Glass Bottles and Containers - CRV	X					
Green Glass Bottles and Containers - Non-CRV	X					
Brown Glass Bottles and Containers - CRV	X					
Brown Glass Bottles and Containers - Non-CRV	X					
Other Colored Glass Bottles and Containers - CRV	X					
Other Colored Glass Bottles and Containers - Non-CRV	X					
Tin/Steel Cans - CRV Bimetal Containers	X					
Tin/Steel Cans - Other	X					
Aluminum Cans - CRV	X					
Aluminum Cans - Non-CRV	X					
PETE Containers - CRV	X					
PETE Containers - Non-CRV	X					
HDPE Containers - CRV	X					
HDPE Containers - Non-CRV	X					
Miscellaneous Plastic Containers - CRV	X					
Miscellaneous Plastic Containers - Non-CRV	X					
Food				X	X	X
Leaves and Grass				X	X	X
Prunings and Trimmings				X	X	X

Materials marked with an X are considered recovered for the purposes of the analysis.

Appendix C: Description of Calculations

This appendix details the calculations used to calculate the composition and quantity data. The quantity and composition data were calculated at the statewide level for each waste stream within a group and for the statewide overall commercial waste stream. The calculations were performed the same for the disposed, curbside recycle and curbside organics waste streams as well as other diversion materials collected in bins, roll offs, compactors, or carts. This section includes a special note regarding the calculation for materials not collected in bins, roll offs, compactors, or carts; a note for sites with mixed-waste processing, and a note for the T3 calculations.

Calculating the Waste Stream Quantities

Industry Group Quantities

Annual tonnage for each industry group was estimated based on actual measurement of the amount of material at a generator site shortly before the regular pick-up by the hauler. The procedure for measuring and calculating disposal or diversion per employee for a typical site in each industry group is described below. Figure 78 following the explanation provides a graphical illustration of this process. The following steps describe the disposed waste quantification process; however, diversion quantities for materials placed in bins were calculated using the same process. Materials diverted apart from the bins were also included in the total diversion calculations for each industry group.

1. **Disposed Waste Volume Measurements**: The field crew recorded the length, width, and height to the nearest inch for all disposed waste at each site. The volume of the disposed waste at each site was the sum of all volumes for each waste container (if there was more than one container on-site), in cubic inches. In calculations this quantity was noted as V_O.

2. **Disposed Waste Accumulation Time**: During initial recruitment screening calls, recruiters asked the responsible party at the site for information to determine waste accumulation time, including: the business operating hours, the time the waste containers were last collected by the hauler (or regular collection schedule), and when trash was regularly taken outside to dumpsters. While on-site, the field crew verified the critical information. This information was used to calculate (1) the hours of accumulation for the observed disposed waste volume (A_O) and (2) the total hours of disposed waste accumulation time per year (A_A). These two numbers were used to calculate the *percent of the annual waste generation* (A_P) that was observed during the measurement.

   For a site with the following waste information:

   Hours waste was generated: 9 a.m. to 5 p.m., Monday through Saturday
   Waste was transported to dumpsters: Continuously
   Waste was collected: Monday before 9 a.m.
   Day and time of accumulation measurement: Friday, 3 p.m.

The following is an example of the hours of accumulation for the observed disposed waste volume calculation:

A_O = 8 hrs Monday + 8 hrs Tuesday + 8 hrs Wednesday + 8 hrs Thursday + 6 hrs Friday
A_O = 38 hrs

The following is an example of the total hours of disposed waste accumulation time per year calculation:

A_A = 8 hrs per day x 6 days per week x 52 weeks per year
A_A = 2,496 hrs

Thus, the *percent of the annual waste generation* that was observed during the measurement is:

$A_P = A_0/A_A$

A_P = 38 hrs/2,496 hrs

A_P = 1.52%

3. **Annual Disposed Waste Volume**: The *volume of the disposed waste* (calculated in step 1) was divided by the *percent of the annual waste generation* (calculated in step 2) during the observed period to determine the *annual disposed waste volume* (V_A). This was calculated in cubic yards per year for each site. The following is an example for a site with a V_O of 46,000in^3. Note: 1 cubic yard = 46,656 in^3.

V_O = 46,000 in^3/46,656in^3/yd^3 = 0.99 yd^3

$V_A = V_O/A_P$

V_A = 0.99 yd^3/A_P

V_A = 0.99 yd^3/0.0152

V_A = 64.9 yd^3

To confirm the accuracy of the measurements, the calculated *annual disposed waste volume* was compared to the volume estimated by multiplying the container size by the number of annual collections. When the *annual disposed waste volume* based on research measurements was more than 150 percent of the volume based on the container size and collection frequency, the estimate based on measurements was replaced with the estimated volume based on the container size and collection frequency.

4. **Reported Disposed Waste Tons**: When a site uses a compactor for its disposed waste, the recruiters determined the annual tonnage at a site by (1) asking the person responsible for the data at the site or (2) using hauler records.

Tonnage data were obtained in tons per time period. In these cases, the tonnage data were used instead of the volume estimates.

5. **Volume of Sample**: The volume of a sample was measured in one of three ways:

    a. Measurements of waste in the dumpster taken before and after removing waste for a sample to calculate volume of removed waste.

    b. When accessing the container was not possible, as was the case with compactors, volume measurements were recorded in gallons based on the amount of material that was deposited in the containers used to transport the disposed waste sample from the site to the sorting facility.

    c. If neither of the methods described above were possible, the researchers measured the volume of the sample after it was dumped on the sorting floor.

    All *sample volume* measurements were converted into cubic yards. Samples and *sample volume* measurements were collected for all identified disposed waste substreams at a given site.

6. **Weight of Sample**: The *sample weight* was calculated as the sum of all the sorted components.

7. **Average Density of Disposed Waste per site**: The *average disposed waste density per site* was calculated for each site by dividing the sum of all *sample weights* for a given site by the sum of all *sample volumes* for that site.

$$\text{Average Density}_g = \frac{\sum_i w_{i,g}}{\sum_i v_{i,g}}$$

    where:

    g represents a given site
    i denotes each individual sample
    $w_{i,g}$ represents the weight of sample i at site g
    $v_{i,g}$ represents the volume of sample i at site g

8. **Annual Disposed Waste Quantity**: The *average disposed waste density per site* was used to convert *annual disposed waste volume* measurements for each site into annual tons.

    For sites with multiple disposed waste substreams, each substream was measured separately, then added together to calculate a total *annual disposed waste quantity* for each site.

9. **Average Density of Disposed Waste per Industry Group**: The group density was calculated for small sites and large sites separately. The *average disposed*

waste density was calculated for each industry group by dividing the sum of all *annual disposed waste quantities* at all small sites for a given industry group by the sum of all *annual disposed waste volumes* at all small sites for that industry group.

$$\text{Average Density}_{g} = \frac{\sum_{i} w_{i,g}}{\sum_{i} v_{i,g}}$$

where:

g represents a given industry group
i denotes each individual site
$w_{i,g}$ represents the annual quantity of disposed waste at site i in group g
$v_{i,g}$ represents the annual volume of disposed waste at site i in group g

The same calculation was repeated for the large sites. The overall group density was the weighted average of the small and large densities, weighted by the group's statewide employment at small sites and at large sites.

10. **Tons per Employee per Year**: Information was gathered from each site regarding the number of employees, expressed as Full Time Equivalents (FTEs). The *annual disposed waste quantity* for each site was divided by the FTE figure for that site to calculate a tons per employee per year (TPEPY) figure for each site. The group TPEPY was calculated for small sites and large sites separately. The sum of the *annual disposed waste quantity* for all small sites in a group was divided by the sum of the FTEs for all small sites in that group to generate the small sites TPEPY for that industry group. The same calculation was performed for large sites. The overall group TPEPY was the weighted average of the small and large TPEPY, weighted by the group's statewide employment at small sites and at large sites. TPEPY was the primary method used to calculate annual tons for all sites and groups except multi-family. Multi-family annual tons was calculated on a *tons per unit per year* basis.

    For the following groups, disposal was also correlated with the noted factors. The number of sites used in the correlative factor calculations for each of these groups is note in Table 98.

    All Groups: actual employment instead of FTEs
    Group 1: number of annual visitors
    Group 3: number of staff, number of students, and number of school days
    Group 4: numbers of rooms
    Group 8: number of beds
    Group 13 and Group 14: per thousand square feet of building space.

Table 98. Sites Used in Additional Correlatives Calculations

Industry Group	Correlative Units	Number of Sites Included in Correlative Calcs	
		Disposed	Diverted
Arts, Entertainment, & Recreation	Tons per 1,000 Visitors per Year	39	21
Education	Tons per 100 Students per Year	40	21
Hotels & Lodging	Tons per Guest Room per Year	46	26
Hospital, Nursing, & Residential Care Facilities	Tons per Bed per Year	28	15
Services - Management, Administrative, Support, & Social	Tons per 1,000 Sq. Ft. per Year	50	44
Services - Professional, Technical, & Financial	Tons per 1,000 Sq. Ft. per Year	40	40

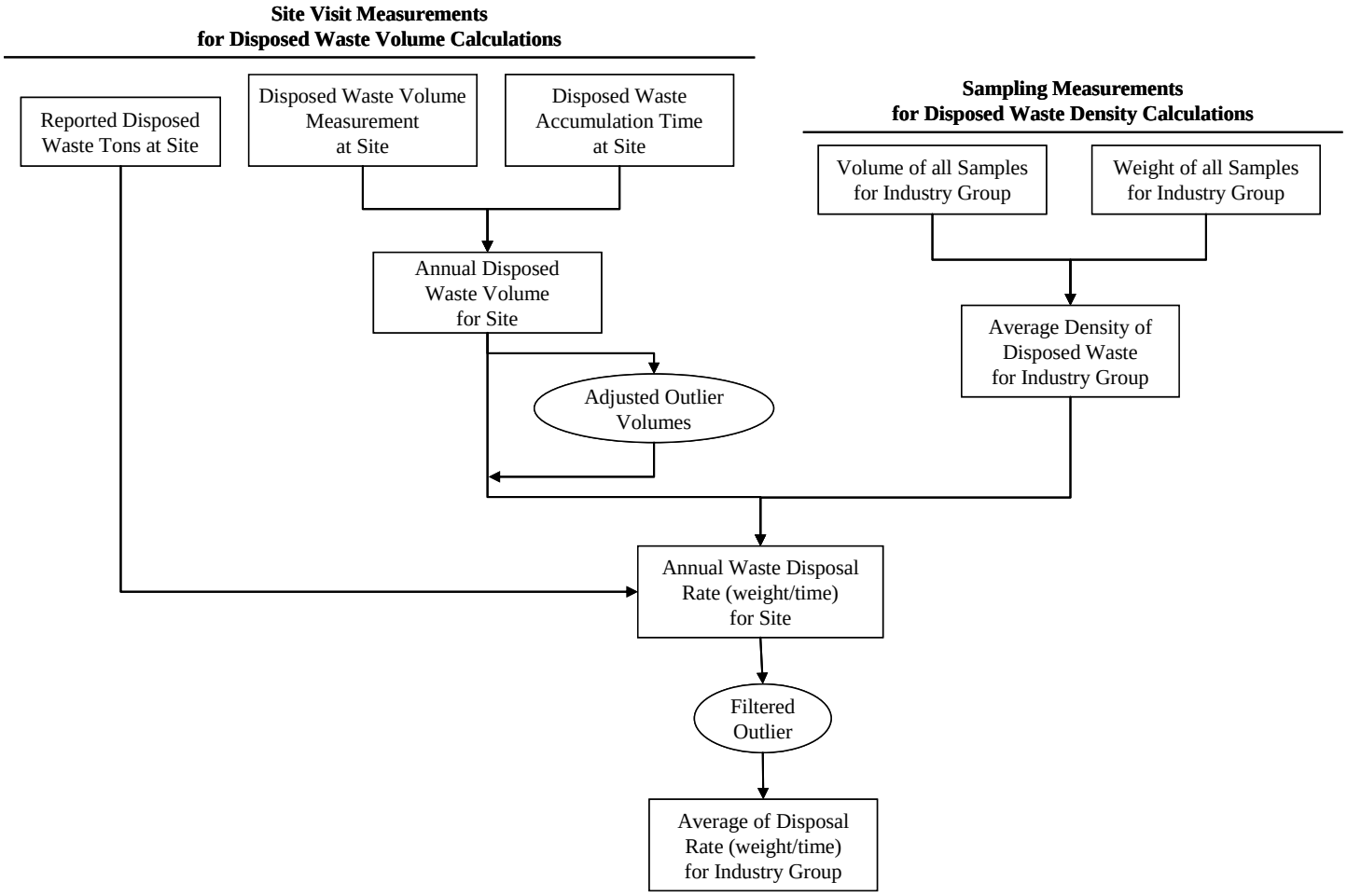
Sites selected for Task 4 with zero diversion were included in the quantity calculations. Their quantity was calculated as zero tons, but their employment was included in step nine of the quantification calculation.

The study also calculated a yards per employee per year (YPEPY) figure for each group. The YPEPY skips steps 4-9 in the above calculation, it is simply the sum of the *annual disposed waste volume* for all small sites in a group was divided by the sum of the FTEs for all small sites in that group. The same calculation was performed for the large sites. The overall group YPEPY was the weighted average of the small and large YPEPY, weighted by the group's statewide employment at small sites and at large sites.

Because not every generator site was able to provide complete annual quantity and volume data, the generator sites included in the TPEPY calculations are slightly different than the sites included in the YPEPY calculations, which are again slightly different than the sites used in the density calculations. For this reason, trying to use any two of those metrics to calculate the third will results in a slightly different figure than those published in this report.

The material quantification process is summarized in Figure 78.

Figure 78. Material Quantification Process



Statewide Commercial Sector Overall Quantities

The statewide commercial sector overall TPEPY was calculated by aggregating the annual tons associated with each group and dividing by the total number of employees statewide. The following list describes the calculations for the disposed waste stream but the same process was followed for any waste stream (disposal, curbside recycle, etc.).

1. Multiply the group-specific TPEPY (calculated in step 10 of the previous list) by the total number of employees statewide in that group (from Table 80) to calculate the annual disposal for the group.
2. Sum the annual statewide disposal for all groups to calculate the statewide commercial sector overall disposal.
3. Divide the statewide commercial sector overall disposal by the total number of employees statewide to calculate the statewide commercial sector overall TPEPY.

$$\frac{\sum_i (TPEPY_i * Employment_i)}{Employment_{state}}$$

for i = 1 to n, where n = number of industry groups

Special Note for Non-Containerized Collection

We anticipated that some diverted materials, such as pallets, toner cartridges, food and furniture donations, and other items not collected in bins, roll-offs, compactors, or carts could not be readily quantified using the above method. These materials were frequently diverted through non-curbside programs such as self-hauling, back-hauling, and informal collection networks. For these situations the field crew quantified these materials using whatever means were appropriate for the situation including:

- Annual records indicating the amount diverted in tons.
- Using direct weights instead of volumes for most pure streams (source-separated items such as pallets, toner cartridges, bales of cardboard). For example, the field crew visited a business open seven days per week that had six pallets on-site that accumulated over six days and weighed 180 pounds in total. The field crew estimated that the business diverts 365 pallets in one year at 30 pounds per pallet for a total of 5.5 tons per year.
- Estimates from staff at the site. Often non-curbside materials were collected on variable schedules so the field crew relied on accumulation time ("this material has been here about six weeks") and collection schedule ("we get this picked up about every three months") estimates from the staff.

Annual quantity estimates of non-curbside materials were scaled to TPEPYs using the same calculation as other disposed and diverted materials (detailed in step 10, above).

Special Note for Sites with Mixed-Waste Processing

The analysis made special considerations for sites where the disposed material is sent to a mixed-waste processor (MWP). For any particular site with a MWP, the composition of the disposed stream samples at that site were adjusted to reflect the sorting efficiency and sorted commodities at the MWP where that site's materials are tipped. When MWP-specific performance data was not available, industry averages and professional opinions were applied. The materials expected to be diverted at the MWP from that site are included in the other diversion stream from that site.

For example, say disposal at business A is 50 percent *newspaper* and 50 percent *food*, and the local MWP captures 100 percent of the inbound *newspaper* and 0.0 percent of the inbound *food.* In that case, the site's disposed sample composition would be adjusted to reflect the diversion of the *newspaper.* The new disposed sample composition would be 100 percent *food*, and the annual disposal quantity would be reduced likewise. In the same manner, the annual other diversion quantities would be increased to reflect the diverted *newspaper* and the other diversion composition adjusted accordingly.

Calculating the Waste Stream Compositions

This section describes the general calculation approach that was used when producing the following:

- estimated composition on a mean percentage basis
- estimated composition on a weighted average percentage basis

Details of the calculation method varied slightly among the industry groups studied, since there were inevitably irregularities and unexpected situations reflected in the data. The following descriptions reference the disposed waste; however, the diversion composition was calculated using the same process.

Industry Group Composition

Mean Percent Estimates

For a given industry group, the composition estimate denoted by r_j represents the ratio of the material's weight to the total weight of all the samples in the stratum. It was derived by summing each material's weight across all of the selected samples belonging to a given industry group and dividing by the sum of the total weight of waste for all of the samples from that industry group, 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 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 was derived in two steps. First, the variance around the estimate was calculated, accounting for the fact that the ratio included two random variables (the material and total sample weights). The variance of the ratio estimator equation follows:

$$\mathrm{Var}(r_j) \approx \left(\frac{1}{n}\right)\left(\frac{1}{\overline{w}^2}\right)\left(\frac{\sum_i \left(c_{ij} - r_j w_i\right)^2}{n-1}\right)^*$$

where:

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

*For more information regarding the variance calculation, please refer to William G. Cochran, *Sampling Techniques, 3rd Edition*, John Wiley & Sons, Inc., Indianapolis, Indiana, 1977.

Second, the confidence interval at the 90 percent confidence level was calculated for a material's mean as follows:

$$r_j \pm \left(z\sqrt{\mathrm{Var}(r_j)}\right)$$

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

Weighted Averages

For all groups, data was gathered from subgroups defined by the size of the businesses. These groups and subgroups are described in Table 81. In addition, the Medical & Health group was divided into two NAICS-defined subgroups. The estimated annual tons corresponding to each subgroup was used as weighting factors.

In the equation below, O_j represents the mean percent estimate for material *j* in the waste disposed by an industry group that was made up of multiple subgroups, which are numbered 1, 2, 3, etc. The relative weighting factors for each subgroup, expressed as percentages of the entire annual tonnage for the industry group statewide, are represented by the variables p_1, p_2, p_3, etc. The mean estimate of the percent of the disposed waste stream corresponding to the material *j* for each subgroup was represented by the variables r_{j1}, r_{j2}, r_{j3}, etc.

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

where:

> O_j = the mean percent estimate for material *j* in the waste disposed by the noted group
> *p* = the proportion of annual tons contributed by the noted size groups
> *r* = ratio of material weight to total waste weight in the noted size groups
> for *j* = 1 to *m*, where *m* = number of materials

For example, business locations belonging to a particular industry group might be identified as having two size categories, with the "small" locations corresponding to 100,000 tons, and the "large" locations including 150,000 tons. From the waste sampling data, the percentage of cardboard in the disposed waste may be different for the two size categories: 6 percent at the small locations and 2 percent at the large locations. The weighted combination of the composition findings would be performed as follows:

Proportion of tons from small establishments:

$$p_{\text{small}} = \frac{100{,}000}{100{,}000 + 150{,}000} = 0.4$$

Proportion of tons from large establishments:

$$p_{\text{large}} = \frac{150{,}000}{100{,}000 + 150{,}000} = 0.6$$

Overall percentage calculation for cardboard at both types of establishments:

$$O_{\text{cardboard}} = (0.4 \times 6\%) + (0.6 \times 2\%) = 3.6\%$$

The variance of the weighted average was calculated:

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

where:

$\hat{V}_{r_j}$ = the variance of the composition estimate for the material in the indicated size group

<u>Addressing Sites with Multiple Substreams</u>

For sites where a particular waste stream (disposals, curbside recycle, etc.) was composed of multiple substreams, data from the multiple substream samples were combined using a weighted calculation process to create a composite sample that reflects the composition of all substreams at the site. The example below indicates how this was done for a site with multiple <u>disposal</u> substreams; however, the calculation was the same regardless of the waste stream. This method was particularly useful for the Other Diversion stream, which was frequently composed of many substreams (ink toner, self-haul of CRV containers, furniture donations, etc.).

In the formula below, O_j represents the mean percent estimate for material *j* in the waste disposed by a site that was made up of multiple substreams, which are numbered 1, 2, 3, etc. The relative weighting factors for each substream, expressed as percentages of annual tonnage at the site, are represented by the variables p_1, p_2, p_3, etc. The mean estimate of the percent of the disposed waste stream corresponding to the material *j* for each substream was represented by the variables r_{j1}, r_{j2}, r_{j3}, etc.

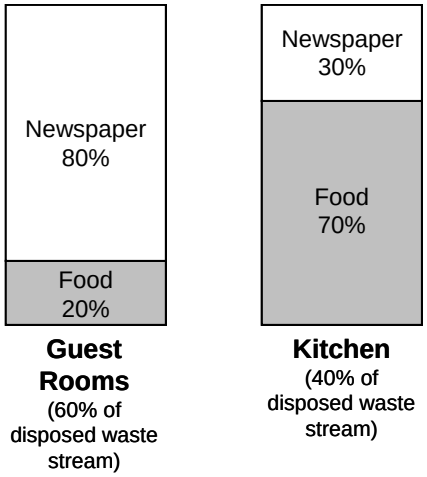
$$O_j = (p_1 * r_{j1}) + (p_2 * r_{j2}) + (p_3 * r_{j3}) + \ldots$$

where:

O_j = the mean percent estimate for material *j* in the waste disposed at the site
p = the proportion of tonnage contributed by the noted substream
r = ratio of material weight to total waste weight in the noted substream
for *j* = 1 to *m*, where *m* = number of materials

The composite sample was based on a weighted average of the composition from each substream as in the example hotel with two substreams below. Figure 79 illustrates the waste substreams at the hotel.

Figure 79. Example Scenario for Addressing Sites with Multiple Substreams



The first substream was the guest rooms waste representing 60 percent of all of the hotel's disposed waste, and the second substream was the kitchen waste substream representing the other 40 percent of waste disposed at the hotel. The weighted combination of the composition findings was performed as follows:

Proportion of tons from guest rooms: 60 percent
Proportion of tons from kitchens: 40 percent
Overall percentage calculation for newspaper at the site:

$$O_{newspaper} = (0.6 * 80\%) + (0.4 * 30\%) = 60\%$$

The resulting sets of material composition percentages were used to construct a “composite sample” for the entire hotel. To keep the composite sample in proportion to other samples in the data set, the composite sample was set to equal the average weight of the actual waste samples obtained and sorted from the specific site.

In the hotel example, if the actual guest room waste sample weighs 250 pounds, and the actual kitchen waste sample weighs 230 pounds, then the material weights in the calculated composite sample totaled the average of those two figures, or 240 pounds. This average weight was then multiplied by the composite sample material percentages to calculate a new set of sample weights for the composition analysis (described above). The material weight for newspaper in the composite sample was 60 percent of 240 pounds, or 144 pounds.

Statewide Commercial Sector Overall Composition

The statewide commercial sector overall composition was the weighted average of the individual group and subgroup compositions. Annual tons in each group and subgroup statewide were used as the weighting factors. The calculation was completed as follows:

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

where:

O_j = the mean percent estimate for material *j* in the waste disposed statewide
p = the proportion of tons contributed by the noted subgroup
r = ratio of material weight to total waste weight in the noted subgroup
for *j* = 1 to *m*, where *m* = number of materials

The variance of the weighted average was calculated:

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

where:

$\hat{V}_{r_j}$ = the variance of the composition estimate for the material *j* in the disposed waste statewide.

Calculating Waste Generation

Total waste generation was the sum of all disposal and diversion activities. It was calculated at the group level and for the commercial sector statewide.

Industry Group Generation

Quantity Calculations

The generation for an individual group was the sum of that group's statewide disposal and diversion. The calculation was completed as follows:

$$G_j = T_{Dj} + T_{CRj} + T_{COj} + T_{ODj}$$

Where:

G_j = Statewide generation for material *j*
T_D = Statewide disposed tons for material *j*
T_{CR} = Statewide curbside recycle tons for material *j*
T_{CO} = Statewide curbside organics tons for material *j*
T_{OD} = Statewide other diversion tons for material *j*
for *j* = 1 to *m*, where *m* = number of materials

Mean Percent Estimates

For a given industry group, the composition estimate denoted by r_{ij} represented the ratio of the material's generation to the total generation in the industry group. It was derived by calculating the statewide generation for a particular material in a given industry group (G_{ij}) and dividing by the total generation for all materials in that industry group, as shown in the following equation:

$$r_j = \frac{G_j}{G_w}$$

where:

r_j = the proportion of annual generation for material *j* in group *i*
G_j = Annual generation for material *j* in group *i*
G_w = sum of all material weights in group *i*
for *j* = 1 to *m*, where *m* = number of materials

Statewide Commercial Sector Overall Generation

Quantity Calculations

The statewide commercial sector overall generation was the sum of disposal and diversion from all groups statewide. The calculation was completed as follows:

$$G_{ij} = T_{Dij} + T_{CRij} + T_{COij} + T_{ODij}$$

Where:

G = Statewide generation for material j
T_D = Statewide disposed tons for material j
T_{CR} = Statewide curbside recycle tons for material j
T_{CO} = Statewide curbside organics tons for material j
T_{OD} = Statewide other diversion tons for material j
for j = 1 to m, where m = number of materials
for i = 1 to n, where n = number of industry groups

Mean Percent Estimates

Statewide, the composition estimate denoted by r_{ij} represents the ratio of the material's statewide commercial sector overall generation to the total statewide commercial sector generation. It was derived by calculating the statewide generation for a particular material across all industry groups (G_{ij}) and dividing by the total generation for all materials statewide, as shown in the following equation:

$$r_{ij} = \frac{G_{ij}}{G_{iw}}$$

where:

r_{ij} = the proportion of annual generation for material j
G_{ij} = Annual generation for material j
G_{iw} = sum of all material weights in group i
for j = 1 to m, where m = number of materials
for i = 1 to n, where n = number of industry groups

Special Note for Task 3 Analysis

The quantity and rate calculations for Task 3 were completed slightly differently than for the other tasks in this study. The Task 3 analysis required calculating for each industry group and multi-family:

1. The quantity of material diverted through curbside programs,
2. The quantity of material disposed from businesses and multi-family with a curbside diversion container,
3. The composition of material diverted through curbside programs,
4. The composition of material disposed from businesses and multi-family with a curbside diversion container,
5. The proportion of clean and contaminated standard recoverable materials in the curbside diversion containers, and
6. The proportion of clean and contaminated standard recoverable materials in the disposal containers.

Items one and three were calculated as part of Task 4.

Item four was calculated by completing a composition analysis of the disposed waste including only the sites with curbside diversion in the composition calculations. This composition was completed following the process spelled out in Calculating the Waste Stream Compositions section of this appendix.

Items five and six were calculated using the information collected during the contamination subsorts at sites selected for the Task 3 analysis. Once the disposed and curbside diversion compositions were calculated, the clean and contaminated proportions calculated from the contamination subsorts were applied to the composition estimates. For example:

If:

> based on the curbside recycling sampling, *newspaper* was 12 percent of the medical & health curbside recycling stream

and if:

> based on the contamination subsorts, the field crew determined that 50 percent of the *newspaper* in the medical & health sites' recycling bin was clean and 50 percent was source-contaminated

Then

> 6 percent of the medical health curbside recycling stream was clean *newspaper* and 6 percent was source contaminated *newspaper.*

For businesses, item two was calculated using the following steps:

1. The curbside recycling and curbside organics TPEPYs were calculated using only the sites with curbside diversion containers following the calculations spelled out in the Calculating the Waste Stream Quantities section of this appendix. The TPEPYs calculated in this step were greater than the TPEPYs calculated in Task 4 because the annual curbside diversion quantities remain constant (since by definition the total quantity of curbside diversion was diverted from businesses with curbside diversion) but the number of employees has been reduced (since this analysis excludes employees at sites without curbside diversion that were included in the Task 4 analysis).
2. The statewide curbside diversion tons were then divided by the curbside diversion TPEPY at sites with curbside diversion to estimate the number of employees statewide with curbside diversion.
3. The disposed TPEPY was calculated using only the sites with curbside diversion containers following the calculations spelled out in the Calculating the Waste Stream Quantities section of this appendix. The TPEPYs calculated in this step were expected to be lower than the TPEPYs calculated in Task 2 because presumably sites with curbside diversion containers put less material in their disposal containers than sites without curbside diversion containers.
4. The statewide annual disposed waste quantity from sites with curbside diversion was calculated by multiplying the number of employees calculated in step two by the special disposed TPEPY calculated in step three.

For multi-family, item two was calculated using the following steps:

1. The number of multi-family units statewide with curbside diversion was estimated by applying the proportion of units recruited with curbside diversion to the total number of units statewide.
2. The disposed TPUPY (tons per unit per year) was calculated using only the sites with curbside diversion containers following the calculations spelled out in the Calculating the Waste Stream Quantities section of this appendix. The TPUPYs calculated in this step were expected to be lower than the TPUPYs calculated in Task 2 because presumably multi-family sites with curbside diversion containers put less material in their disposal containers than multi-family sites without curbside diversion containers.
3. The statewide annual disposed waste quantity from multi-family sites with curbside diversion was calculated by multiplying the number of units calculated in step one by the special disposed TPUPY calculated in step two.

This process was repeated until for each industry group and multi-family we had:

1. The quantity of material diverted through curbside programs,
2. The quantity of material disposed from sites with a curbside diversion container,
3. The composition of material, including contamination levels, diverted through curbside programs, and
4. The composition of material, including contamination levels, disposed from sites with a curbside diversion container.

This data allowed us to calculate the quantities and composition from sites with curbside diversion for the overall commercial sector following the calculations spelled out in the Statewide Commercial Sector Overall Quantities and Statewide Commercial Sector Overall Composition sections of this appendix.

Appendix D: Field Forms

Node Recruitment

This section includes the forms used to recruit the nodes.

Node Recruitment Script

Task 2 Recruitment Script

Generator Waste Characterization Study

Hello, my name is _____ and I am calling from CalRecycle regarding the statewide waste characterization study we're carrying out next year.

Could I please speak to the operations or facility manager about helping us out with this study?

[once the correct person is on the phone]

The reason I am calling you today is to ask for your assistance with this year's study.

[if we've sampled at this facility previously, mention that this will be less intrusive than the work we did in ____]

Part of the study involves collecting samples of waste directly from the dumpster at businesses within a 30 mile radius of your facility. What we are asking from you is:

- The use of your facility as a place we can bring these samples to sort and then dispose of when finished.
- We anticipate collecting samples of MSW from up to 100 businesses in your region and each sample will weigh approximately 200 lbs. (a maximum of 10 tons).
- The waste we will be bringing in is normal MSW collected directly from dumpsters of these area businesses—the same material that collection trucks would be collecting and disposing.
- We don't anticipate needing much assistance from your staff—our professional sorting crew has logged thousands of hours at landfills and transfer stations around the country— our only real requirement is that you provide us with a safe space large enough to allow our professional 4 person crew to stage and sort these samples. Something approximating 20 feet X 40 feet would suffice. Spaces used for this work have included unused commercial or self-haul tipping lanes or any other space that is out of your way and harm's way. A covered area would be nice but is not required.
- If the sorting crew is setup where they can dispose the material as they go (directly into the pit or onto the ground), they will. If they are set up where that isn't an option, you will need to provide a container for them to dump sorted material into which you can empty as needed.
- We may need to work at your facility for up to 15 days.
- Access to a restroom would also be required.

If this sounds like something you could assist us with, then I some additional site and contact information questions that may take about 10 minutes to answer.

If Yes, proceed to the *Task 2 Facility Data Collection Sheet*

Node Recruitment Form

Task 2 Facility Data Sheet--Generator Study

Name of site:

1. SCHEDULE

Season recruited for sampling.

- ☐ February
- ☐ April
- ☐ July
- ☐ October

[We are still finalizing the annual schedule and will contact you with specific date requests as soon as possible.]

Are there any dates that definitely will not work for you?

2. FACILITY CONTACT INFORMATION

Please circle or note the best way of contacting each person—phone, email, text, etc.

Physical address:	
City, Zip:	

Site owner/operator (company name or public agency name):

Person approving use of the site:	
Mailing address:	
City, Zip:	
Phone:	Email:

Person with data about the site (if different):	
Phone:	Email:
Fax:	

On-site manager or supervisor (primary contact for logistics):	
Phone:	Email:
Will this person be available on the indicated dates?	

Contact person for crew when they arrive the morning of sampling:	
Phone:	Email:

1

Backup contact:	
Phone:	Email:

Health and Safety Manager (if applicable)	
Phone:	Email:

Risk Management Contact (where should we send our proof of insurance?)	
Phone:	Email:

3. SITE INFORMATION

Facility's hours of operation:

M _____
T _____
W _____
Th _____
F _____
Sat _____
Sun_____

Hours we would be allowed to work, if different from hours of operation _____.

Do you close early if you have reached your allowed daily tonnage amount? Yes No

Estimate how many times per month this happens. _____/month

Are there site conditions we need to be aware of such as high winds, snakes or other animals, or other special circumstances?

If you do have inclement weather that impacts operations, is there a secondary location where the crew can carry out their work?

Would it be possible for the sorting crew to be there when the site is closed, for example after hours or on weekends if needed?

4. SAMPLING AND SORTING PROCEDURES

We will be bringing MSW into the facility from local businesses. These businesses may or may not be part of the routes you are contracted to handle. Could we bring this material in free of charge as part of our study or should we plan on paying a tipping fee for it? What fee should we anticipate paying? _____$/ton.

We need an area for the sorting crew to work in for the entire time we will be at the site. It should be about the size of two truck bays (20 x 40). Can the site accommodate this? Where do you think that will be?

Is this space covered or will it be open to the elements? If open to the elements (landfill, etc.), could a temporary "pad" be installed (gravel, mulch, etc.) to make the workplace safter for the crew?

Is there a place to store our trailer with our sorting equipment and covered samples overnight?

Our crew will have up to date safety gear— hardhats, safety vests, coveralls, boots, and gloves—plus will cover a daily safety training plan. Is there any other PPE or special procedures you want them to use?

5. FINAL LOGISTICS

Any other issues or special circumstances we need to be aware of?

We will send you a copy of our insurance policy. Is there anything else you need from us?

Please remember to notify gate personnel of the dates we will be visiting your facility.

Cal Recycle may wish to visit the facility to observe the field procedures, would this be ok? If so, who should we coordinate this visit with?

We will provide a one month and a one week reminder of our visit. We will use these reminders to finalize and verify sampling and sorting logistics and dates. Would you like any other reminders?

If we have further questions, someone from the project team (CalRecycle, Cascadia Consulting Group, or Sky Valley Associates) will contact you.

Letter to Haulers Operating in Node Areas

California Environmental Protection Agency Edmund G. Brown Jr., Governor

CalRecycle DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

1001 I STREET, SACRAMENTO, CALIFORNIA 95814 • WWW.CALRECYCLE.CA.GOV • (916) 322-4027
P.O. BOX 4025, SACRAMENTO, CALIFORNIA 95812

«Date»

«Hauler»
«Street»
«City», «State» «ZIP»

Attn: «Contact»

RE: Statewide Waste Disposal Characterization Study

Dear Hauler/Recycler:

As we have done in the past, the California Department of Resources Recycling and Recovery (CalRecycle) is conducting a major data collection effort in 2014 to characterize California's waste stream. This study will enable us to update and expand our Waste Characterization Database as it relates to several disposal sectors, as well as evaluate the effect the Mandatory Commercial Recycling law (AB 341) has had on reducing recyclables in the disposed waste stream. The database could not have been successfully developed without the cooperation and expertise of private sector haulers and facility operators. Such is the case today as we move forward with our efforts to update the database and improve its usefulness.

CalRecycle would greatly appreciate your support in performing this Statewide Waste Characterization Study, as some of your customers have been asked to participate. Field work will begin the week of «Start_Date».

A major part of the study involves sampling and characterizing trash and recyclables collected directly at generator (business) sites. Businesses throughout the state will be randomly selected and asked to participate in the generator-based study. A total of 800 businesses will be included in the study, and all 800 businesses will be sampled for trash. A total of 400 of these businesses will be randomly selected to be sampled for recycling as well.

1. The trash samples will be collected from dumpsters and transported to a central site where they will be weighed and sorted, then disposed. The crew will manage materials and abide by any operational and health and safety protocols required by the facility.
2. For recyclables, only materials placed in recycling bins will be sampled and sorted. The sorting will take place at the business site, and materials will be returned to the recycling bins.

Our contractor will be doing all the sample collecting, so your involvement is not needed for that part of the study. However, cooperation that may be needed from haulers and recyclers includes providing information on the service provided to the business – numbers and size of bins, frequency of pickup, pickup days, getting access to locked, bins, etc. Project staff will ask each business to identify its hauler and recycler when the business is contacted to participate in the study, so that project staff can contact the hauler if needed to get the necessary information. Please note that any information you provide will be kept strictly confidential and will be for obtaining waste characterization data only.

Cascadia Consulting Group is the main contractor for the study. The consulting firm conducting the field work for trash sampling is Sky Valley Associates and the crew chief is Brad Anderson. The consulting firm conducting field work for recycling sorting is L2 Environmental and the crew chief is Leslie Lukacs. CalRecycle staff will assist with some of the parts of the study and will also visit some sites to observe the field work.

All data from businesses will remain confidential, and only aggregate data will be reported to give statewide average information about the waste and recycling streams.

For questions or more information, please contact:

Nancy Carr, Project Manager
(916) 341-6216
Nancy.Carr@CalRecycle.ca.gov

Tom Rudy
(916) 341-6229
Thomas.Rudy@CalRecycle.ca.gov

Thank you for your cooperation in this important study.

Sincerely,

John Sitts, Manager
Knowledge Integration Section
Policy Development and Analysis Office

Business Recruitment

This section includes the forms used to recruit generator sites.

Generator Site Recruitment Call Sheet

Business Sector:	Region	Size Break:
Motion Picture and Sound Recording	South	20

Number of Businesses to Recruit (per season):	# Recruited:	Total # of Businesses on List
0 / 2 / 2 / 2		490

Season 1	2	3	4	Business ID	Company Name	Contact Name	Address	City	ZIP	Phone	NAICS Description	Number of Employees	# of times contacted	Recruited (Y or N)	Comments
Y	-	-	-	51270				Palm Springs	92264		Motion Picture & Video Production	8			
Y	-	-	-	52200				Gilman Hot Spgs	92583		Motion Picture & Video Production	300			
Y	-	-	-	51819				Big Bear City	92314		Sound Recording Studios	5			
Y	-	-	-	49626				Indian Wells	92210		Motion Picture & Video Production	6			
Y	-	-	-	51051				Palm Springs	92262		Motion Picture Theaters (Except Drive-Ins)	16			
-	Y	-	Y	5423				Los Angeles	90028		Sound Recording Studios	15			
-	Y	-	-	12416				Culver City	90230		Motion Picture & Video Production	5			
-	Y	-	Y	5687				Los Angeles	90028		Motion Picture & Video Production	60			
-	Y	-	Y	31564				Universal City	91608		Motion Picture & Video Distribution	10			
-	Y	-	-	5749				Los Angeles	90029		Motion Picture & Video Production	5			
-	Y	-	Y	30397				Burbank	91506		Motion Picture & Video Distribution	15			
-	Y	-	Y	7048				Los Angeles	90038		Motion Picture & Video Production	200			

Initial Business Recruitment Script

CALRECYCLE STATEWIDE STUDY--GUIDELINES FOR BUSINESS RECRUITMENT

Introduction

Hi, I'm working with CalRecycle, California's governmental solid waste management agency. We're conducting a study about waste and recycling disposal and we'd like to request your help with this study. May I speak to_____(contact name, manager/owner?)

The purpose of the study is to find out how much and what kind of waste and recycling is being created and disposed by California's businesses. The findings of this study will help the State plan for future recycling and disposal needs. Our research team wants to take a sample of garbage and maybe recycling from your dumpster or trash can, which we will take away, sort, and dispose. All the results of the study are completely anonymous and we will be averaging your results together with hundreds of other businesses statewide. **No individual business will be identified in the study results.**

The study consists of three parts:

1) This initial phone call (which will only take a few minutes)

2) A follow up phone call within a week to make arrangements for collecting a sample of garbage and to gather a few more details about your waste handling practices (which takes about 5-10 minutes).

3) A visit to your business to take a sample of garbage and just look at your recycling. (which shouldn't take more than 10 minutes of your time and could take none or very little to none depending on how accessible your dumpsters are)

Would you be willing to assist us with this study? We would be happy to provide you with the study results if you do participate, which can be helpful for your own personal waste and recycling planning.

- If no, thank them for their time and hang up.
- If yes, continue on…

Screening Criteria

Thank you, I have a few more questions for you, just to verify your business meets a few criteria.

- Does your business have fewer than 5 employees?
  - If no, move on to next question
  - If yes, thank them for their time and say it won't work out
- Do you operate your business out of your home?
  - If no, move on to next question
  - If yes, thank them for their time and say it won't work out
- Do you share a dumpster (or compactor) with another business? (For instance, if in an office building or mall)
  - If no, move on to next question
  - If yes, thank them for their time and say it won't work out
- Do you generate at least 200 lbs of garbage between scheduled pickups OR do you generate 200 lbs of garbage over the course of one week? *This 200 lbs is for garbage only, this does not include recycling or compost.* An example of what 200 lbs might look like: two 96 gallon carts or a full one yard dumpster.
  - If yes to either question, they pass and move on to the follow-up questions
  - If no, thank them for their time and say it won't work out

(over)

Follow-up Questions [They've said yes and pass all the criteria]

Great, if I could get some general contact information:

- Verify address, business name, and type of business (you are you in the business of…)
  - If their current physical address is not the same as the physical address supplied on the call sheet, verify that their new zip code is still within the study area.
- What are the hours of operation for the business?
- Can I get the contact information for the person or persons, if different from you, who we should call back to get more detailed information about your disposal and recycling practices such as days garbage and recycling is collected, dumpster sizes, etc.? When is the best time to reach this person? How do they prefer being contacted? *(phone, email, text)*
- Do you know where your garbage goes when collected?
  - Landfill, transfer station, material recovery facility (MRF, *pronounced "murf"*)
- Do you have recycling service? Do you have compost service? *(Food scraps, green waste, etc.)*
- Subsequent calls and visits to collect information and material will be carried out by members of either our contracted research team, Cascadia Consulting Group, or by CalRecycle staff. Are both of these options acceptable to you?

Thank them and remind them that they will receive a follow up phone call within a week to gather more logistics about their trash and recycling.

Business Recruitment Form

CalRecycle Statewide Study
Business Recruitment Form

☐ **Recruitment Finished (for CCG use only)**

Business ID #: _____ **Recruitment date and time:** _____

Region: _____ **Recruiters:** (COS) _____ / (CCG) _____

1. Contact Information

Business name *(as it appears on sign outside)* Name: _____

Street address Address: _____

2. Screening Criteria

☐ Business has 5 or more employees ☐ Business does not share dumpster with other business

☐ Business is not out of a home ☐ Business generates 200 lbs of waste in one week / per collection

☐ Business has agreed to participate in all parts of the study ☐ Verify business industry group is correct

Industry Group: _____ Describe if uncertain of correct classification _____

3. Additional Information

Hours of operation Days & Hours: _____

Senior manager who has given permission Name: _____

☐ You have explained all aspects of the study to the senior manager Title: _____

Phone: _____ Preferred followup (phone email text)

☐ Manager of Trash / Custodial Crew Name: _____

☐ Aware they will be contacted after your phone call for further waste details and sampling logistics Phone: _____ Preferred followup (phone email text)

Person who can provide data (operational hours, employees, etc) Name: _____

Role_____ Phone: _____ Preferred followup (phone email text)

(for CCG use only)
Person to contact when we arrive/notify of our imminent arrival. Name: _____

Phone: Preferred followup (phone email text)

Where does garbage go?	Other Services Provided:	Do They Want Results?	Is being contacted by CalRecycle OK?
☐ Landfill ☐ Transfer Station	☐ Recycling	☐ Yes	☐ Yes
☐ Materials Recovery Facility	☐ Compost	☐ No	☐ No

Recrutment Notes:

Business ID #: _____

4. Correlative Factors

All Businesses:

Total Number of Employees _____

Number of Full Time Equivelants (FTE) _____

Hotels:

Number of Rooms _____

Schools (K-12 Only)

Number of Students _____

Number of Staff _____

Number of School Days per Year _____

Apartment Buildings

Number of Apartments _____

Number Occupied _____

Groups G&H

(G-Services - Professional + FIRE + Communications)

(H-Services - Management, Administrative, Support, Social)

Sq. Ft. of business space _____

Do they occupy the whole bldg? ☐ Part? ☐

Any Enviro Certifications?

None ☐ LEED ☐

Energy Star ☐ Other ☐

Group J-Hospital+Nursing & Res. Care Facilities

Number of Beds _____

Group K - Art

Number of visitors annually? _____

5. Waste Streams & Other Materials Diverted

List all waste streams :

(example: trash, recycling, compost, etc.)

Waste streams: _____

List all other materials diverted :

(example: cardboard, pallets, shrink wrap, metal, etc.)

Name/description: _____

Do you participate in a waste exchange *(what materials and how much)* _____

Do you donate used equipment *(what materials and how much)* _____

Do you donate leftover food *(only ask of appropriate business types)* _____

Do you recycle ink and toner cartridges *(how many/how much)* _____

Have you converted from paper towels to hand dryers? When? _____

Is your waste or recycling being "scavenged"? Yes No _____

If yes, do you know what materials are being scavenged and how much of each? _____

Commercially Collected Waste Streams

1st Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

2nd Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

3rd Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

4th Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

5th Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

Recruitment Notes

Notes:

Business ID #: _____

Other Materials Diverted

1st Material

Name/description: _____

(actual quantities if possible, estimate if necessary.)

Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

2nd Material

Name/description: _____

(actual quantities if possible, estimate if necessary.)

Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

3rd Material

Name/description: _____

(actual quantities if possible, estimate if necessary.)

Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

4th Material

Name/description: _____

(actual quantities if possible, estimate if necessary.)

Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

5th Material

Name/description: _____

(actual quantities if possible, estimate if necessary.)

Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

6th Material

Name/description: _____

(actual quantities if possible, estimate if necessary.)

Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

7th Material

Name/description: _____

(actual quantities if possible, estimate if necessary.)

Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

Recruitment Notes

Notes:

Business ID #: _____

6. Waste Generation and Collection

Days and hours waste is generated — Days & Hours: _____

Disposal Times

Days and times trash is taken TO the container
(be specific, ex. After closing or after lunch crowd at 2pm)
☐ Continuously, or
Times: _____

Days and times recycling is taken TO the container
(be specific, ex. After closing or after lunch crowd at 2pm)
☐ Continuously, or
Times: _____

Days and times compost is taken TO the container
(be specific, ex. After closing or after lunch crowd at 2pm)
☐ Continuously, or
Times: _____

Collection Times

When is trash picked up by hauler — Days & Times: _____

☐ *Verified collection times with hauler*

Is trash dirty MRF'd? *(verify with hauler and circle one)* Yes No

When is recycling picked up by hauler — Days & Times: _____

☐ *Verified collection times with hauler*

When is compost picked up by hauler — Days & Times: _____

☐ *Verified collection times with hauler*

7. Sampling Visit

List barriers--locks or gates--that we will encounter when we visit, and times they are enforced. Dogs or guards present?

Gates or Locks? _____
Other Barriers? _____
Times Enforced _____

When can we get access to containers?
(i.e. during business hours only, 24 hours per day, other constraints, etc.)

Is this the same for all containers, including recycling and compost?

MCR Questions

Do you know about state or city/county requirements for businesses to recycle? Yes No

If yes, have you changed your recycling practices or pickup service because of these require Yes No

Recruitment Notes

Notes:

Business ID #: _____

8. Waste Container Measurements

____ **Container** **Waste Stream Name:** _____

Type of container _____

Container description *(if necessary)* _____

Location of container *(if not the same as all others in this waste stream)* _____

☐ Waste generation time is the same as in Section 5, *explain if different* _____

☐ Waste is taken TO container the same as in Section 5, *explain if different* _____

☐ Hauler collection times are the same as in Section 5, *explain if different* _____

Tons of trash generated _____ tons/per _____ *(time frame)*

Source of this information _____

— ***OR*** —

Container measurements, ***measured from inside wall to inside wall***

Side to Side measurement Length: _____ inches

Front to Back measurement Depth: _____ inches

Height of Trash measurement Height: _____ inches

☐ Approximately how full was this container full ¾ ½ ¼ empty *(circle one)*

Time of last trash collection before measurement Day: _____ , _____ am / pm

Time of measurement Day: _____ , _____ am / pm

Notes:

____ **Container** **Waste Stream Name:** _____

Type of container _____

Container description *(if necessary)* _____

Location of container *(if not the same as all others in this waste stream)* _____

☐ Waste generation time is the same as in Section 5, *explain if different* _____

☐ Waste is taken TO container the same as in Section 5, *explain if different* _____

☐ Hauler collection times are the same as in Section 5, *explain if different* _____

Tons of trash generated _____ tons/per _____ *(time frame)*

Source of this information _____

— ***OR*** —

Container measurements, ***measured from inside wall to inside wall***

Side to Side measurement Length: _____ inches

Front to Back measurement Depth: _____ inches

Height of Trash measurement Height: _____ inches

Approximately how full was this container full ¾ ½ ¼ empty *(circle one)*

Time of last trash collection before measurement Day: _____ , _____ am / pm

Time of measurement Day: _____ , _____ am / pm

Notes:

Business Recruitment Letter

California Environmental Protection Agency

Edmund G. Brown Jr., Governor

CalRecycle

DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

1001 I STREET, SACRAMENTO, CALIFORNIA 95814 • WWW.CALRECYCLE.CA.GOV • (916) 322-4027
P.O. BOX 4025, SACRAMENTO, CALIFORNIA 95812

Re: **Statewide Waste Characterization Study**

Dear Business Owner or Manager:

CalRecycle is conducting a study of the types and amounts of materials in California's waste and recycling streams. We have randomly selected more than 800 California businesses to be part of the study. We need your help to get good data! Thank you for agreeing to participate. We use this information to:

1. Determine where specific material types are originating—and where they're ending up;
2. Track our progress in providing Californians the tools necessary to reduce our wastes; and
3. Identify key opportunities to support Californians in using less, recycling more, and taking resource conservation to higher levels.

This strategy has worked. With a 66% diversion rate, California is currently leading the nation in terms of program effectiveness. There are currently more than 100,000 jobs related to recycling and diversion in California, and as recycling increases, so will the jobs. Jurisdictions throughout the state are reaching new, higher levels of waste prevention and diversion; and businesses are transforming their industries by innovating new and better ways to manage resources.

You are being asked to help with two or three phases of the study:

- The first phase is a 15-20 minute phone interview asking general questions about your current trash and recycling services.
- The second phase consists of collecting a sample of your waste, which will be sorted at a local waste disposal or processing facility to determine the exact types and quantities of materials disposed. Please keep in mind that your trash will be combined with others from your business type and that your trash will be disposed of immediately and properly afterwards.
- About half of the businesses will participate in the third phase – an onsite survey of your business by one of our specially trained consultants to identify and measure current diversion practices. This may include sorting materials in your recycling or compost bins.

CalRecycle has hired Cascadia Consulting Group, Consumer Opinion Services, Sky Valley Associates, and L2 Environmental to assist with the study.

Any information about your business will be kept confidential and only aggregate totals will be used in the final analysis. The study results for your business will be provided to you upon request.

If you have any questions or would like more information about the study, please contact our Project Managers, Nancy Carr, at (916) 341-6216 or nancy.carr@calrecycle.ca.gov; or Tom Rudy at (916) 341-6229 or thomas.rudy@calrecycle.ca.gov. The project website is available at http://www.calrecycle.ca.gov/WasteChar/2014Study.htm. Thank you for your cooperation in assisting us with this important study.

Sincerely,

John Sitts, Manager
Knowledge Integration Section

Multi-Family Recruitment

Multi-Family Recruitment Script

CALRECYCLE STATEWIDE STUDY--GUIDELINES FOR MULTIFAMILY RECRUITMENT

Introduction

Hi, I'm working with CalRecycle, California's governmental solid waste management agency. We're conducting a study about waste and recycling disposal and we'd like to request your help with this study. May I speak to_____(contact name, manager/owner?)

The purpose of the study is to find out how much and what kind of waste and recycling is being created and disposed by California's businesses, apartments, and houses. The findings of this study will help the State plan for future recycling and disposal needs. Our research team wants to take a sample of garbage and maybe recycling from your dumpster or trash can, which we will take away, sort, and dispose. All the results of the study are completely anonymous and we will be averaging your results together with hundreds of other businesses statewide. **No individual business will be identified in the study results.**

The study consists of two parts:

1) This initial phone call (which will only take a few minutes)

2) A visit to your business to take a sample of garbage and just look at your recycling. (which shouldn't take more than 10 minutes of your time and could take none or very little to none depending on how accessible your dumpsters are)

Would you be willing to assist us with this study? We would be happy to provide you with the study results if you do participate, which can be helpful for your own personal waste and recycling planning.

- If no, thank them for their time and hang up.
- If yes, continue on…

Screening Criteria

Thank you, I have a few more questions for you, just to verify your business meets a few criteria.

- Do you share a dumpster (or compactor) with a business or other apartment building?
  - If no, move on to next question
  - If yes, thank them for their time and say it wont work out
- Do you have 5 or more apartment units?
  - If yes, they pass and move on the follow-up questions
  - If no, thank them for their time and say it wont work out
  -

Follow-up Questions [They've said yes and pass all the criteria]

Great, if I could get some general contact information:

- Can I get the contact information for the person or persons, if different from you, who we should call back to get more detailed information about your disposal and recycling practices such as days garbage and recycling is collected, dumpster sizes, etc.? When is the best time to reach this person? How do they prefer being contacted? *(phone, email, text)*
- How many units are in the building? How many of those are normally occupied (are there usually vacancies)?
- Do you know where your garbage goes when collected?
  - Landfill, transfer station, material recovery facility (MRF, *pronounced "murf"*)
- Do you have recycling service? Do you have compost service? *(Food scraps, green waste, etc.)*
- Subsequent calls and visits to collect information and material could be carried out by CalRecycle staff. Would this be acceptable to you?

Thank them and remind them that they will receive a follow up phone call within a week to gather more logistics about their trash and recycling.

Multi-Family Recruitment Form

CalRecycle Statewide Study
Multifamily Recruitment Form

☐ **Recruitment Finished (for CCG use only)**

Business ID #: _____ **Recruitment date and time:** _____

Region: _____ **Recruiters:** (COS) _____ / (CCG) _____

1. Contact Information

Business name *(as it appears on sign outside)* Name: _____

Street address Address: _____

_____

2. Screening Criteria

☐ Apartment complex has 5 or more units Season: (circle) Winter Spring

☐ Apartment complex does not share dumpster with other business Summer Fall

☐ Apartment complex has agreed to participate in all parts of the study

_____

3. Additional Information

Senior manager who has given permission Name: _____

☐ You have explained all aspects of the study to the senior manager Title: _____

Phone: _____ Preferred followup (phone email text)

☐ Manager of Trash / Custodial Crew Name: _____

☐ Aware they will be contacted after your phone call for further waste details and sampling logistics Phone: _____ Preferred followup (phone email text)

Person who can provide data Name: _____

Role_____ Phone: _____ Preferred followup (phone email text)

(for CCG use only)
Person to contact when we arrive/notify of our imminent arrival. Name: _____

Phone: _____ Preferred followup (phone email text)

Where does garbage go?	Other Services Provided:	Do They Want Results?	Is being contacted by CalRecycle OK?
☐ Landfill ☐ Transfer Station	☐ Recycling	☐ Yes	☐ Yes
☐ Materials Recovery Facility	☐ Compost	☐ No	☐ No

Recrutment Notes:

Business ID #: _____

4. Correlative Factors

All Businesses:

Total Number of Employees _____

Number of Full Time Equivelants (FTE) _____

Hotels:

Number of Rooms _____

Schools (K-12 Only)

Number of Students _____

Number of Staff _____

Number of School Days per Year _____

Apartment Buildings

Number of Apartments _____

Number Occupied _____

Groups G&H

(G-Services - Professional + FIRE + Communications)

(H-Services - Management, Administrative, Support, Social)

Sq. Ft. of business space _____

Do they occupy the whole bldg? ☐ Part? ☐

Any Enviro Certifications?

None ☐ LEED ☐

Energy Star ☐ Other ☐

Group J-Hospital+Nursing & Res. Care Facilities

Number of Beds _____

Group K - Art

Number of visitors annually? _____

5. Waste Streams & Other Materials Diverted

List all waste streams :

(example: trash, recycling, compost, etc.)

Waste streams: _____

List all other materials diverted :

(example: cardboard, pallets, shrink wrap, metal, etc.)

Name/description: _____

Do you participate in a waste exchange *(what materials and how much)* _____

Do you donate used equipment *(what materials and how much)* _____

Do you donate leftover food *(only ask of appropriate business types)* _____

Do you recycle ink and toner cartridges *(how many/how much)* _____

Have you converted from paper towels to hand dryers? When? _____

Is your waste or recycling being "scavenged"? Yes No _____

If yes, do you know what materials are being scavenged and how much of each? _____

Commercially Collected Waste Streams

1st Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

2nd Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

3rd Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

4th Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

5th Waste Stream Name/description *(trash, rec, compost, glass, etc.)* _____

Number of dumpsters, compactors, etc. _____

Location(s) of containers _____

Container Sizes (if known) _____

Annual Quantities (if known) _____ tons/per _____ *(time frame)*

Source for quantity information (bills, invoices) _____

Hauler and Contact Name/Phone (if known) _____

Recruitment Notes

Notes:

Business ID #: _____

Other Materials Diverted

1st Material Name/description: _____

(actual quantities if possible, estimate if necessary.) Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

2nd Material Name/description: _____

(actual quantities if possible, estimate if necessary.) Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

3rd Material Name/description: _____

(actual quantities if possible, estimate if necessary.) Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

4th Material Name/description: _____

(actual quantities if possible, estimate if necessary.) Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

5th Material Name/description: _____

(actual quantities if possible, estimate if necessary.) Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

6th Material Name/description: _____

(actual quantities if possible, estimate if necessary.) Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

7th Material Name/description: _____

(actual quantities if possible, estimate if necessary.) Quantity diverted: _____

Per *(circle one)*: Day Week Month Year

Recruitment Notes

Notes:

Business ID #: _____

6. Waste Generation and Collection

Days and hours waste is generated — Days & Hours: _____

Disposal Times

Days and times trash is taken TO the container
(be specific, ex. After closing or after lunch crowd at 2pm)
☐ Continuously, or
Times: _____

Days and times recycling is taken TO the container
(be specific, ex. After closing or after lunch crowd at 2pm)
☐ Continuously, or
Times: _____

Days and times compost is taken TO the container
(be specific, ex. After closing or after lunch crowd at 2pm)
☐ Continuously, or
Times: _____

Collection Times

When is trash picked up by hauler — Days & Times: _____

☐ *Verified collection times with hauler* _____

Is trash dirty MRF'd? *(verify with hauler and circle one)* Yes No

When is recycling picked up by hauler — Days & Times: _____

☐ *Verified collection times with hauler* _____

When is compost picked up by hauler — Days & Times: _____

☐ *Verified collection times with hauler* _____

7. Sampling Visit

List barriers--locks or gates--that we will encounter when we visit, and times they are enforced. Dogs or guards present?

Gates or Locks? _____
Other Barriers? _____
Times Enforced _____

When can we get access to containers? _____
(i.e. during business hours only, 24 hours per day, other constraints, etc.) _____

Is this the same for all containers, including recycling and compost? _____

MCR Questions

Do you know about state or city/county requirements for businesses to recycle? Yes No

If yes, have you changed your recycling practices or pickup service because of these require Yes No

Recruitment Notes

Notes:

Business ID #: _____

8. Waste Container Measurements

____ **Container** **Waste Stream Name:** _____

Type of container _____

Container description *(if necessary)* _____

Location of container *(if not the same as all others in this waste stream)* _____

☐ Waste generation time is the same as in Section 5, *explain if different* _____

☐ Waste is taken TO container the same as in Section 5, *explain if different* _____

☐ Hauler collection times are the same as in Section 5, *explain if different* _____

Tons of trash generated _____ tons/per _____ *(time frame)*

Source of this information _____

— ***OR*** —

Container measurements, ***measured from inside wall to inside wall***

Side to Side measurement Length: _____ inches

Front to Back measurement Depth: _____ inches

Height of Trash measurement Height: _____ inches

☐ Approximately how full was this container full ¾ ½ ¼ empty *(circle one)*

Time of last trash collection before measurement Day: _____ , _____ am / pm

Time of measurement Day: _____ , _____ am / pm

Notes:

____ **Container** **Waste Stream Name:** _____

Type of container _____

Container description *(if necessary)* _____

Location of container *(if not the same as all others in this waste stream)* _____

☐ Waste generation time is the same as in Section 5, *explain if different* _____

☐ Waste is taken TO container the same as in Section 5, *explain if different* _____

☐ Hauler collection times are the same as in Section 5, *explain if different* _____

Tons of trash generated _____ tons/per _____ *(time frame)*

Source of this information _____

— ***OR*** —

Container measurements, ***measured from inside wall to inside wall***

Side to Side measurement Length: _____ inches

Front to Back measurement Depth: _____ inches

Height of Trash measurement Height: _____ inches

Approximately how full was this container full ¾ ½ ¼ empty *(circle one)*

Time of last trash collection before measurement Day: _____ , _____ am / pm

Time of measurement Day: _____ , _____ am / pm

Notes:

Multi-Family Recruitment Letter

California Environmental Protection Agency | Edmund G. Brown Jr., Governor

CalRecycle

DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

1001 I STREET, SACRAMENTO, CALIFORNIA 95814 • WWW.CALRECYCLE.CA.GOV • (916) 322-4027
P.O. BOX 4025, SACRAMENTO, CALIFORNIA 95812

January 14, 2014

Re: Use of Your Apartment Complex for Statewide Waste Characterization Study

Dear Apartment or Mobile Home Complex Owner or Manager:

CalRecycle is conducting a statewide waste characterization study to gather information on materials disposed by residential and commercial sources. Apartment complexes and mobile home parks are needed for the study to gather information on residential waste. This research will help to track our progress in meeting waste reduction goals, and in determining future steps to continue to reduce waste. Your site was randomly selected to be one of 50 sites throughout the state, and data from all sites will be combined to produce general information on waste from apartments and mobile homes. Any specific information for individual sites will be kept strictly confidential.

A sampling crew of 2-3 people will visit your site and remove a sample of about 200 pounds of garbage from the dumpsters at your site and place it in a container they bring with them. This sample will be taken to a nearby facility where samples from residential and commercial garbage trucks are also being collected. Once the sample has been sorted and weighed the material is disposed of along with trash from other samples. The sampling crew may visit early in the morning or in the evening on a day agreed upon in advance. This work is expected to begin the week of January 20, 2014 and conclude in November 2014.

At this time we need the following information to arrange sampling:

Who to contact at the site
Location and accessibility of dumpsters
Waste hauler name and pickup days
Total number of units and number of occupied units

Our contractors, **Cascadia Consulting Group** and **MSW Consultants**, will be contacting the site to collect building information shortly before the sampling date. The sampling crew will be from **MSW Consultants. John Bowles** is the crew supervisor.

Thank you for cooperating with this study!

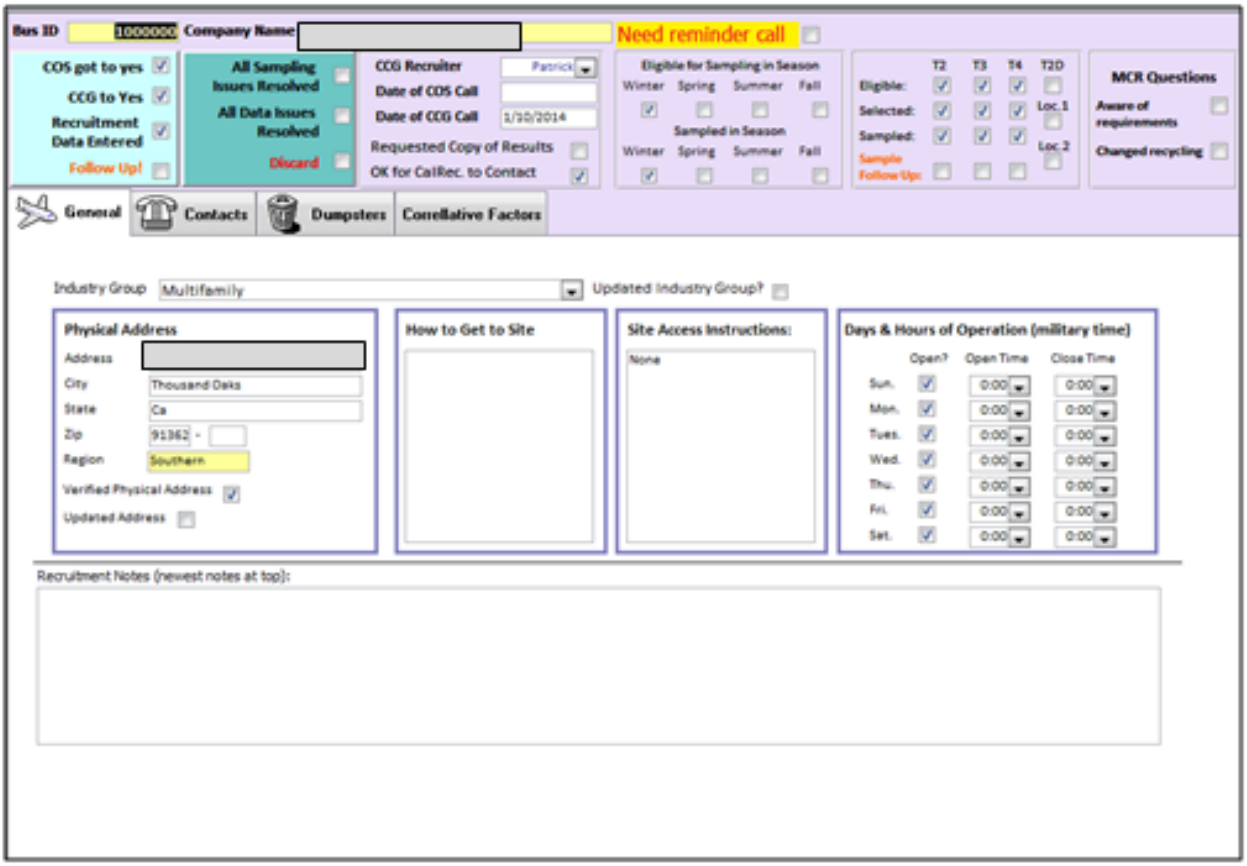
If you have any questions, please contact either of the following staff at CalRecycle:

Nancy Carr (916) 341-6216 e-mail: nancy.carr@calrecycle.ca.gov
Tom Rudy (916) 341-6229 e-mail: thomas.rudy@calrecycle.ca.gov

Sincerely,

John Sitts, Manager
Knowledge Integration Section

Business and Multi-Family Recruitment Database



Container Number: 1 | Container ID: 734

Container Location & Description: 1/2 way down drive on right side in corral

Hours Trash is Generated (e.g., 8am-6pm): 24/7

How is trash taken out? continuous

If regular, when? (military time)

Sun.	☐ Time	
Mon.	☐ Time	
Tue.	☐ Time	
Wed.	☐ Time	
Thu.	☐ Time	
Fri.	☐ Time	
Sat.	☐ Time	

If regular, when? (OLD)

Is This Container Scavenged? ☑

Scavenging Notes: cans, furniture

Garbage Destiny: Landfill

Notes: Waste management is the hauler.

Pure Stream Material

Enter tons from biz/hauler records: per

Dumpster Measurements

72 x 42 x 40

Before Sample Volume Measurements 1st Visit

72 x 42 x 39 inches

After Sample Measurements 1st Visit

72 x 42 x 14 inches

Sample Date 1/20/2014 Time: 7:00

Date of Last Pickup: Time:

Before Sample Volume Measurements 2nd Visit

x x inches

After Sample Measurements 2nd Visit

x x inches

Sample Date: Time:

Date of Last Pickup: Time:

Before Sample Volume Measurements 3rd Visit

x x inches

After Sample Volume Measurements 3rd Visit

x x inches

Sample Date Time:

Date of Last Pickup: Time:

Sample Notes

Field Data Collection Forms

Figure 80. Example Site Visit Form, Garbage and Diversion

[redacted]

Ambulatory Health Care Services

4982

Southern

[redacted]

Los Angeles 90025

THIS BUSINESS NEEDS A REMINDER CALL ☐

Recruited by: Ana On

On-site Contact: [redacted] Facility Manager

Permission to Sample: Co-office Manager

Other contacts:

Facilities/Custodial: [redacted] Facility Manager

Data: Facility Manager

Special directionsfor finding the site	Special instructions for accessing the site	Special instructions about when to go
	Locked. When sampling call [redacted], M-F 9:00-17:00 to help you out or get combination for dumpster. He said W-F would be best time to come, but Mondays are over flowing, so that would provide a good sample.	

Recruitment Notes

Business Hours

	Open	Close
Sunday		
Monday	9:00	17:00
Tuesday	9:00	17:00
Wednesday	9:00	17:00
Thursday	9:00	17:00
Friday	9:00	17:00
Saturday		

Substream # 1 **Material Type:** Curbside Garbage Desc. if Other [ ] # of Containers 3

Collected 3 time(s) per week

Collected On: M, W, F AM

4982 Page 1 of 3

Substream # 1 Material Type: Curbside Garbage Desc. if Other [ ] # of Containers 3

Container # 1 Type: dumpster

Where is the container: Back of building

Locked? ☑

Special instructions to access the container: Locked. Call [redacted] to gain access, he'll show you to the dumpsters

Contamination Subsort? ☑

Collection is regular

Collected 3 time(s) per week

Collected On: M, W, F AM

Trash is taken out: continuous

If regular, goes out at ____

Container Volume (inches): Width Length Height inches

Material volume before sampling (inches): Width Length Height inches

Material volume after sampling (inches): Width Length Height inches

Date and time of measurements:

Date and time of last pick-up:

Container # 2 Type: dumpster

Where is the container: Back of building

Locked? ☑

Special instructions to access the container: Locked. Call [redacted] to gain access, he'll show you to the dumpsters

Contamination Subsort? ☑

Collection is regular

Collected 3 time(s) per week

Collected On: M, W, F AM

Trash is taken out: continuous

If regular, goes out at ____

Container Volume (inches): Width Length Height inches

Material volume before sampling (inches): Width Length Height inches

Material volume after sampling (inches): Width Length Height inches

Date and time of measurements:

Date and time of last pick-up:

4982

Page 2 of 3

Substream # 1 Material Type: Curbside Garbage Desc. if Other [ ] # of Containers 3

Container # 3 Type: dumpster

Collection is regular

Collected 3 time(s) per week

Collected On: M, W, F AM

Trash is taken out: continuous

If regular, goes out at _____

Where is the container: Back of building

Locked? ☑

Special instructions to access the container: Locked. Call [redacted] to gain access, he'll show you to the dumpsters

Contamination Subsort? ☑

	Width	Length	Height	
Container Volume (inches):				inches
Material volume before sampling (inches):				inches
Material volume after sampling (inches):				inches

Date and time of measurements:

Date and time of last pick-up:

4982

Page 3 of 3

Substream # 3874 **Material Type:** Curbside Recycle Desc. if Other [ ] # of Containers 1

Container # 1 Type: dumpster

Where is the container: Back of building

Locked? ☑

Special instructions to access the container: Locked. Call [ ] to gain access

Contamination Subsort? ☑

Collection is regular

Collected 3 time(s) per week

Collected On: M, W, F AM

Material is taken out: continuous

If regular, goes out at _____

Container info verified ☐

Collection info verified ☐

Container Volume (inches): Width Length Height inches

Material volume before sampling (inches): Width Length Height inches

Material volume after sampling (inches): Width Length Height inches

Date and time of measurements: _____

Date and time of last pick-up: _____

If pure stream, weight of accumulated material _____ (if mixed please sort and record weights on a tally sheet)

Notes

4982

Page 2 of 5

Substream # 3875 **Material Type:** Other Diversion Desc. if Other Donate Food # of Containers 1

Container # 1 Type:

Where is the container:

Locked? ☐

Special instructions to access the container:

Contamination Subsort? ☑

Collection is on-call

Collected ___ time(s) per ___

Collected On: on-call

Material is taken out: continuous

If regular, goes out at ___

Container info verified ☐

Collection info verified ☐

Container Volume (inches): Width Length Height inches

Material volume before sampling (inches): Width Length Height inches

Material volume after sampling (inches): Width Length Height inches

Date and time of measurements: ___

Date and time of last pick-up: ___

If pure stream, weight of accumulated material ___ (if mixed please sort and record weights on a tally sheet)

Notes

4982

Page 3 of 5

Substream # 3876 **Material Type:** Other Recycle Desc. if Other Ink and Toner Cartrdiges # of Containers 1

Container # 1 Type:

Where is the container:

Locked? ☐

Special instructions to access the container:

Contamination Subsort? ☑

Collection is on-call

Collected ___ time(s) per _____

Collected On: on-call

Material is taken out: continuous

If regular, goes out at _____

Container info verified ☐

Collection info verified ☐

Container Volume (inches): Width Length Height inches

Material volume before sampling (inches): Width Length Height inches

Material volume after sampling (inches): Width Length Height inches

Date and time of measurements: _____

Date and time of last pick-up: _____

If pure stream, weight of accumulated material _____ (if mixed please sort and record weights on a tally sheet)

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Substream # 3877 **Material Type:** Other Diversion Desc. if Other Donate Used Equipment # of Containers 1

Container # 1 Type:

Where is the container:

Locked? ☐

Special instructions to access the container:

Contamination Subsort? ☑

Collection is on-call

Collected ___ time(s) per ___

Collected On: on-call

Material is taken out: continuous

If regular, goes out at ___

Container info verified ☐

Collection info verified ☐

Container Volume (inches): Width Length Height inches

Material volume before sampling (inches): Width Length Height inches

Material volume after sampling (inches): Width Length Height inches

Date and time of measurements: ___

Date and time of last pick-up: ___

If pure stream, weight of accumulated material ___ (if mixed please sort and record weights on a tally sheet)

Notes

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Figure 81. Example Sample Placard

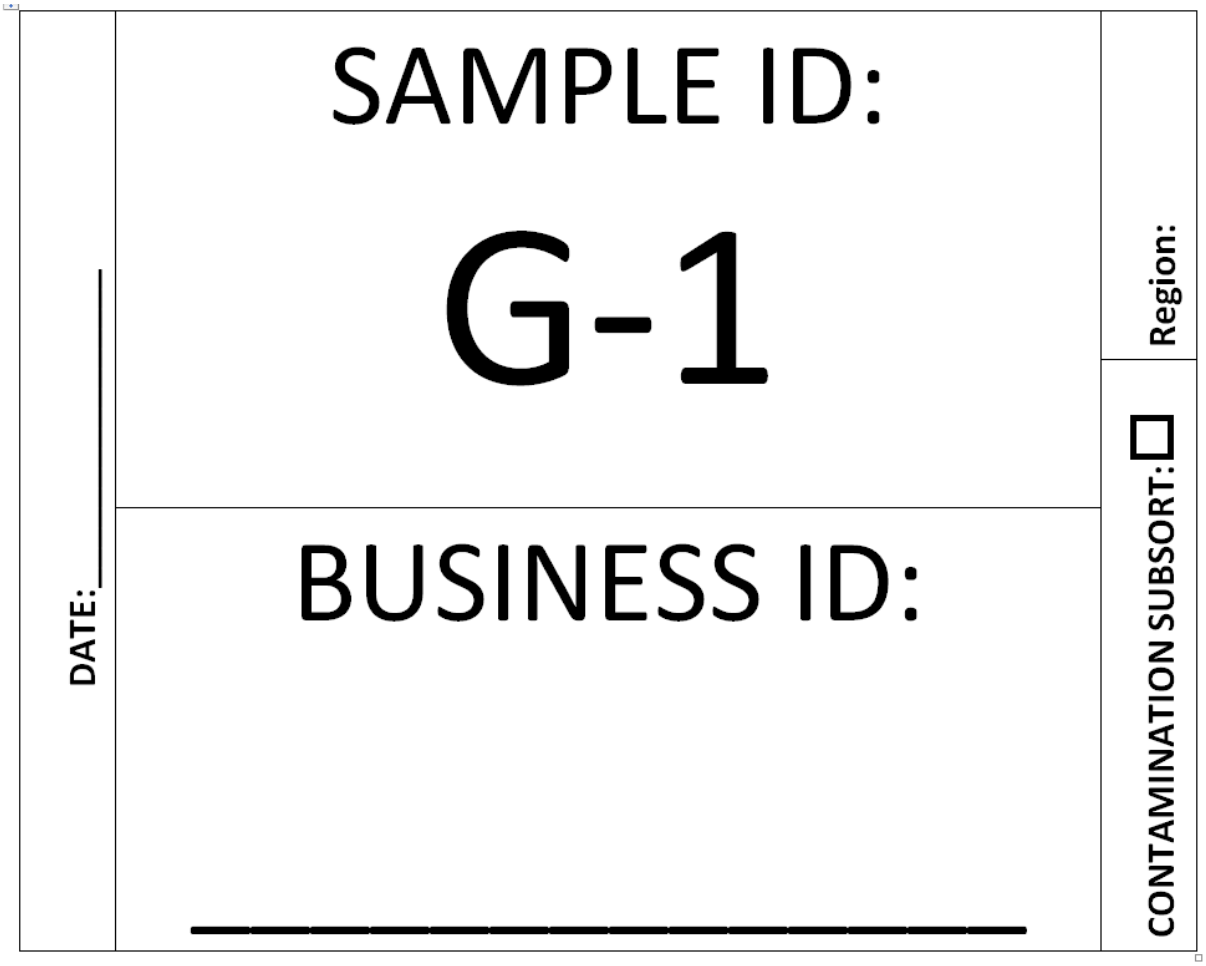

Figure 82. Example Sample Tally Sheet, front

Tally Sheet - Page 1

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Sample ID#:	Business ID#:	Photo: ☐ Subsort: ☐

PAPER				
OCC (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Paper Bags (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Newspaper (Clean)				
(Load Contaminated)				
(Source Contaminated)				
White Ledger (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Other Office Paper (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Magazines/Catalogs				
Phone Book/Directory				
Other Misc. Paper- Comp. (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Other Misc. Paper - Other (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Rigid Food & Bev. Cartons (Clean)				
(Load Contaminated)				
(Source Contaminated)				
R/C Paper - Compostable (Clean)				
(Load Contaminated)				
(Source Contaminated)				
R/C Paper - Other (Clean)				
(Load Contaminated)				
(Source Contaminated)				

GLASS				
Clear - CRV				
Clear - Non-CRV				
Green - CRV				
Green - Non-CRV				
Brown - CRV				
Brown - Non-CRV				
Other Colored - CRV				
Other Colored - Non-CRV				
Flat Glass				
R/C Glass				

If found please call 206-343-9759. Reward offered.

PLASTIC				
PETE Cont. - CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
PETE Cont. - Non-CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
HDPE Cont. - CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
HDPE Cont. - Non-CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Misc. Cont. - CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Misc. Cont. - Non-CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Plastic Trash Bags				
Groc. & Other Merch. Bags				
Non-Bag Com. & Ind. Pack. Film				
Film Products				
Other Film - Flexible Pouches				
Other Film - Other				
Durable - #2 & #5 Bulky Rigids				
Durable Plastic Items - Other				
Remainder/Composite Plastic				

METAL				
Tin/Steel Cans - CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Tin/Steel Cans - Other (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Major Appliances				
Used Oil Filters			Filter Count:	
Other Ferrous				
Aluminum Cans - CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Alum. Cans - Non-CRV (Clean)				
(Load Contaminated)				
(Source Contaminated)				
Other Non-Ferrous				
Remainder/Composite Metal				

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Tally Sheet - Page 2

OTHER ORGANIC	Food				
	(_____ % Leaves) & Grass				
	Prunings and Trimmings				
	Branches and Stumps				
	Manures				
	Textiles				
	Carpet				
	Remainder/Composite Organic				
ELECTRONICS	Brown Goods				
	Computer-related Electronics				
	Other Small Electronics				
	Video Display Devices - CRT				
	Video Display Devices - Other				
INERTS & OTHER	Concrete				
	Asphalt Paving				
	Asphalt Roofing				
	Lumber - Clean Dimensional				
	Lumber - Clean Pallets & Crates				
	Lumber - Clean Engineered				
	Lumber - Other				
	Gypsum Board				
	Rock, Soil and Fines				
	R/C Inerts and Other				
HHW	Paint				
	Vehicle and Equipment Fluids				
	Used Oil				
	Batteries				
	Mercury Items - Not Lamps				
	Lamps-Non-incandescent & Non-halogen				
	R/C HHW				
SPECIAL & MISC.	Ash				
	Treated Medical Waste				
	Bulky Items				
	Tires				
	R/C Special				
	Mixed Residue				

Notes:

Figure 83. Example Sample Tracking Log

Total									Bay Area				Coastal				Mountain				Southern				Valley			
		Total			Large		Small		Total		Large	Small	Total		Large	Small	Total		Large	Small	Total		Large	Small	Total		Large	Small
Group	Task	Goal	Actual		Goal	Actual	Goal	Actual	Goal	Actual	Actual	Actual	Goal	Actual	Actual	Actual	Goal	Actual	Actual	Actual	Goal	Actual	Actual	Actual	Goal	Actual	Actual	Actual
Overall	**Task 2**	**800**	**833**	**104%**	**704**	**485**	**176**	**348**	**183**	**205**	**107**	**98**	**37**	**41**	**20**	**21**	**12**	**12**	**9**	**3**	**443**	**446**	**282**	**164**	**125**	**129**	**67**	**62**
	Task 3	200	214	107%	0	143	0	71	44	52	35	17	8	14	8	6	2	2	1	1	114	116	78	38	32	30	21	9
	Task 4	404	453	112%	0	269	0	184	93	109	62	47	24	28	13	15	10	10	6	4	213	235	147	88	64	71	41	30
A	**Task 2**	**50**	**51**	**102%**	**44**	**34**	**11**	**17**	**9**	**10**	**6**	**4**	**3**	**2**	**1**	**1**	**0**	**0**	**0**	**0**	**25**	**26**	**19**	**7**	**13**	**13**	**8**	**5**
a	Task 3	7	7	100%	-	5	-	2	1	1	1	0	0	0	0	0	0	0	0	0	4	4	3	1	2	2	1	1
a	Task 4	25	30	120%	-	20	-	10	5	7	4	3	2	2	1	1	0	0	0	0	12	15	11	4	6	6	4	2
B	**Task 2**	**50**	**51**	**102%**	**44**	**19**	**11**	**32**	**10**	**9**	**1**	**8**	**1**	**2**	**2**	**0**	**1**	**1**	**1**	**0**	**34**	**32**	**14**	**18**	**4**	**7**	**1**	**6**
b	Task 3	12	12	100%	-	4	-	8	2	2	0	2	0	0	0	0	0	0	0	0	9	9	4	5	1	1	0	1
b	Task 4	25	26	104%	-	10	-	16	5	5	0	5	1	1	1	0	1	1	1	0	16	17	8	9	2	2	0	2
C	**Task 2**	**50**	**51**	**102%**	**44**	**17**	**11**	**34**	**25**	**30**	**11**	**19**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**20**	**6**	**14**	**2**	**1**	**0**	**1**
c	Task 3	4	5	125%	-	1	-	4	2	2	0	2	0	0	0	0	0	0	0	0	2	3	1	2	0	0	0	0
c	Task 4	25	26	104%	-	10	-	16	12	13	3	10	1	0	0	0	0	0	0	0	11	12	7	5	1	1	0	1
D	**Task 2**	**50**	**51**	**102%**	**44**	**31**	**11**	**20**	**10**	**15**	**6**	**9**	**1**	**2**	**1**	**1**	**0**	**0**	**0**	**0**	**31**	**28**	**21**	**7**	**8**	**6**	**3**	**3**
d	Task 3	9	9	100%	-	6	-	3	2	2	1	1	0	0	0	0	0	0	0	0	6	5	4	1	1	2	1	1
d	Task 4	25	26	104%	-	15	-	11	5	5	3	2	1	1	0	1	0	0	0	0	15	15	9	6	4	5	3	2
E	**Task 2**	**50**	**53**	**106%**	**44**	**34**	**11**	**19**	**10**	**12**	**8**	**4**	**2**	**2**	**1**	**1**	**1**	**1**	**1**	**0**	**29**	**28**	**19**	**9**	**8**	**10**	**5**	**5**
e	Task 3	16	16	100%	-	11	-	5	3	3	2	1	1	1	1	0	0	0	0	0	9	9	6	3	3	3	2	1
e	Task 4	25	25	100%	-	16	-	9	5	4	3	1	2	2	1	1	1	1	1	0	13	13	9	4	4	5	2	3
F	**Task 2**	**50**	**53**	**106%**	**44**	**34**	**11**	**19**	**11**	**12**	**7**	**5**	**3**	**4**	**3**	**1**	**1**	**1**	**1**	**0**	**27**	**27**	**20**	**7**	**8**	**9**	**3**	**6**
f	Task 3	5	7	140%	-	3	-	4	1	1	0	1	0	2	1	1	0	0	0	0	3	3	2	1	1	1	0	1
f	Task 4	25	26	104%	-	16	-	10	5	5	3	2	2	3	2	1	1	1	1	0	13	13	8	5	4	4	2	2
G	**Task 2**	**50**	**52**	**104%**	**44**	**36**	**11**	**16**	**16**	**15**	**11**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**28**	**32**	**22**	**10**	**5**	**5**	**3**	**2**
g	Task 3	29	32	110%	-	24	-	8	9	14	11	3	1	1	1	0	0	0	0	0	16	15	11	4	3	2	1	1
g	Task 4	29	42	145%	-	31	-	11	9	16	12	4	1	1	1	0	0	0	0	0	16	22	16	6	3	3	2	1
H	**Task 2**	**50**	**53**	**106%**	**44**	**27**	**11**	**26**	**12**	**13**	**6**	**7**	**2**	**3**	**1**	**2**	**0**	**0**	**0**	**0**	**30**	**30**	**17**	**13**	**6**	**7**	**3**	**4**
h	Task 3	23	23	100%	-	15	-	8	5	6	4	2	1	2	1	1	0	0	0	0	14	13	9	4	3	2	1	1
h	Task 4	25	28	112%	-	17	-	11	6	7	4	3	1	2	1	1	0	0	0	0	15	16	11	5	3	3	1	2
I	**Task 2**	**50**	**51**	**102%**	**44**	**45**	**11**	**6**	**10**	**11**	**9**	**2**	**2**	**2**	**2**	**0**	**1**	**1**	**1**	**0**	**28**	**28**	**26**	**2**	**9**	**9**	**7**	**2**
i	Task 3	17	17	100%	-	16	-	1	3	3	3	0	1	1	1	0	0	0	0	0	10	10	9	1	3	3	3	0
i	Task 4	25	28	112%	-	25	-	3	5	6	5	1	1	1	1	0	1	1	1	0	13	13	12	1	5	7	6	1
J	**Task_2**	**50**	**55**	**110%**	**44**	**42**	**11**	**13**	**11**	**11**	**8**	**3**	**2**	**4**	**1**	**3**	**1**	**1**	**1**	**0**	**28**	**31**	**26**	**5**	**8**	**8**	**6**	**2**
j	Task_3	21	23	110%	-	19	-	4	4	5	4	1	0	1	0	1	1	1	1	0	12	12	10	2	4	4	4	0
j	Task_4	25	33	132%	-	26	-	7	6	7	6	1	1	2	0	2	1	1	1	0	13	17	13	4	4	6	6	0

Appendix E: Detailed Composition Tables

The tables in this appendix detail the composition for the overall commercial sector, each industry group, and multi-family using the full 82-item material list.

Means and Error Ranges

The data from the sorting process were treated with a statistical procedure that provided two kinds of information for each of the *material types*:

- The percent-by-weight estimated composition of waste represented by the samples examined in the study; and
- The confidence interval for the composition estimates.

All confidence intervals were calculated at the 90 percent confidence level. The equations used in these calculations appear in the Appendix C: Description of Calculations.

The example below illustrates how the results can be interpreted. In this example, the best estimate of the amount of *leaves and grass* present in the universe of waste sampled is 3.8 percent. The figure 0.7 percent reflects the precision of the estimate. When calculations are performed at the 90 percent confidence level, we are 90 percent certain that the true amount of *leaves and grass* is between 3.8 percent plus 0.7 percent and 3.8 percent minus 0.7 percent. In other words, we are 90 percent certain that the true mean lies between 4.5 percent and 3.1 percent.

Material Type	Est. Pct.	+ / -
Leaves and grass	3.8%	0.7%

Confidence intervals were presented for each estimate of the amount of a material in the disposed waste stream and the curbside diversion streams. It was possible to calculate these expressions of our “certainty” in the percentage estimates for these streams because the composition estimates were based on a statistical sampling regimen involving randomly chosen segments of the stream (i.e., randomly chosen businesses, randomly chosen dumpsters, and randomly chosen scoops of material). In contrast, it was not possible to calculate similar confidence intervals for the other diversion composition estimates because the diversion estimates were not based on a statistical sampling approach. Instead, the study protocol called for the researchers to quantify all of each type of material that was diverted by each selected business, and their methods consisted more of tallying and accounting than randomized statistical sampling.

Infrequent Material Types

Composition estimates for certain materials have a higher degree of uncertainty for two main reasons:

- The materials are infrequently disposed, and, consequently, appear infrequently in samples. Examples of such materials include *paint*, *tires*, and

ash. Because the composition results are based on few instances of these materials, the results are less certain, as shown by the relatively large confidence intervals.

- The quantity of material is highly variable between samples. *Treated medical waste*, for example, is rarely found in a sample. When it is found, there is usually a large quantity of it (because the sample was generated at a hospital or other treatment facility). This variability also increases the confidence intervals.

As an example, *remainder/composite household hazardous* is estimated to comprise 0.1 percent of the overall disposed stream with a 0.1 percent confidence interval. In other words, *remainder/composite household hazardous* may be as much as 0.2 percent or as little as 0.0 percent of the waste stream, 100 percent more or less than the best estimate (0.1 percent). Small, lightweight materials that appear frequently in samples also make up a small percentage of the overall composition. These frequently found materials, in contrast, have smaller relative confidence intervals. An example is *PETE containers - CRV*, which comprise a small percentage of the overall waste stream (0.3 percent) and have a relatively small confidence interval (0.036 percent).

Table 99. Detailed Composition – Disposed: Overall Commercial Sector

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**26.7%**		**4,415,748**
Uncoated Corrugated Cardboard	3.0%	0.3%	494,244
Paper Bags	0.4%	0.1%	62,235
Newspaper	2.0%	0.3%	337,096
White Ledger Paper	1.6%	0.2%	268,245
Other Office Paper	1.8%	0.3%	293,207
Magazines and Catalogs	0.7%	0.1%	115,761
Phone Books and Directories	0.0%	0.0%	5,777
Other Miscellaneous Paper - Compostable	0.5%	0.2%	77,929
Other Miscellaneous Paper - Other	3.0%	0.3%	493,669
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.5%	0.1%	74,856
Remainder/Composite Paper - Compostable	10.1%	0.9%	1,673,592
Remainder/Composite Paper - Other	3.1%	0.8%	519,135
Glass	**2.0%**		**329,185**
Clear Glass Bottles and Containers - CRV	0.4%	0.1%	59,614
Clear Glass Bottles and Containers - Non-CRV	0.5%	0.2%	83,583
Green Glass Bottles and Containers - CRV	0.1%	0.0%	23,255
Green Glass Bottles and Containers - Non-CRV	0.2%	0.1%	38,278
Brown Glass Bottles and Containers - CRV	0.2%	0.1%	32,066
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	8,081
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	410
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	681
Flat Glass	0.2%	0.1%	32,008
Remainder/Composite Glass	0.3%	0.1%	51,210
Metal	**3.6%**		**601,182**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	7,259
Tin/Steel Cans - Other	0.4%	0.1%	74,236
Major Appliances	0.0%	0.0%	5,239
Used Oil Filters	0.0%	0.0%	1,742
Other Ferrous	0.9%	0.2%	153,526
Aluminum Cans - CRV	0.1%	0.0%	23,594
Aluminum Cans - Non-CRV	0.0%	0.0%	3,903
Other Non-Ferrous	0.7%	0.3%	121,719
Remainder/Composite Metal	1.3%	0.4%	209,964
Electronics	**0.8%**		**131,818**
Brown Goods	0.2%	0.2%	32,602
Computer-related Electronics	0.0%	0.0%	4,772
Other Small Consumer Electronics	0.0%	0.0%	3,877
Video Display Devices - CRT	0.5%	0.4%	82,920
Video Display Devices - Other	0.0%	0.0%	7,647
Plastic	**12.9%**		**2,131,488**
PETE Containers - CRV	0.3%	0.0%	55,693
PETE Containers - Non-CRV	0.2%	0.0%	34,990
HDPE Containers - CRV	0.1%	0.0%	10,090
HDPE Containers - Non-CRV	0.4%	0.1%	66,584
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	3,835
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.0%	45,848
Plastic Trash Bags	2.4%	0.1%	389,709
Plastic Grocery and Other Merchandise Bags	0.2%	0.0%	32,264
Non-Bag Commercial and Industrial Packaging Film	0.6%	0.2%	107,244
Film Products	0.0%	0.0%	2,545
Other Film - Flexible Plastic Pouches	0.1%	0.0%	10,156
Other Film - Other	2.4%	0.4%	397,403
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.1%	34,842
Durable Plastic Items - Other	1.1%	0.2%	175,506
Remainder/Composite Plastic	4.6%	0.7%	764,779

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**38.8%**		**6,420,296**
Food	24.4%	1.3%	4,035,748
Leaves and Grass	3.2%	0.7%	524,559
Prunings and Trimmings	1.7%	0.7%	274,586
Branches and Stumps	0.4%	0.2%	64,366
Manures	0.1%	0.1%	14,884
Textiles	2.3%	0.6%	374,010
Carpet	0.8%	0.4%	134,528
Remainder/Composite Organic	6.0%	0.7%	997,614
Inerts and Other	**13.3%**		**2,198,596**
Concrete	0.7%	0.4%	122,482
Asphalt Paving	0.3%	0.3%	48,429
Asphalt Roofing	0.4%	0.4%	61,718
Clean Dimensional Lumber	0.7%	0.2%	113,949
Clean Engineered Wood	0.6%	0.6%	107,458
Clean Pallets & Crates	4.4%	1.1%	735,005
Other Wood Waste	2.3%	0.7%	387,705
Gypsum Board	0.6%	0.3%	99,223
Rock, Soil and Fines	1.0%	0.5%	170,747
Remainder/Composite Inerts and Other	2.1%	0.8%	351,881
Household Hazardous Waste	**0.2%**		**34,884**
Paint	0.1%	0.0%	9,094
Vehicle and Equipment Fluids	0.0%	0.0%	6,707
Used Oil	0.0%	0.0%	343
Batteries	0.0%	0.0%	2,268
Mercury-Containing Items - Not Lamps	0.0%	0.0%	10
Lamps - Fluorescent and LED	0.0%	0.0%	619
Remainder/Composite Household Hazardous	0.1%	0.1%	15,844
Special Waste	**1.3%**		**207,163**
Ash	0.2%	0.2%	30,397
Treated Medical Waste	0.0%	0.0%	5,849
Bulky Items	0.9%	0.4%	153,016
Tires	0.0%	0.0%	3,884
Remainder/Composite Special Waste	0.1%	0.0%	14,017
Mixed Residue	**0.4%**	**0.2%**	**66,303**
Totals	**100%**		**16,536,664**
Sampled Streams	**840**		

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

Table 100. Detailed Composition – Curbside Recycle: Overall Commercial Sector

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**78.6%**		**1,573,662**
Uncoated Corrugated Cardboard	51.2%	4.2%	1,024,317
Paper Bags	0.6%	0.2%	12,318
Newspaper	1.9%	1.5%	38,121
White Ledger Paper	6.4%	2.0%	127,555
Other Office Paper	4.8%	2.0%	95,814
Magazines and Catalogs	3.7%	1.8%	74,131
Phone Books and Directories	0.0%	0.0%	957
Other Miscellaneous Paper - Compostable	2.8%	1.7%	56,269
Other Miscellaneous Paper - Other	5.3%	2.3%	105,709
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.1%	2,457
Remainder/Composite Paper - Compostable	0.8%	0.3%	16,981
Remainder/Composite Paper - Other	1.0%	0.3%	19,033
Glass	**5.2%**		**104,797**
Clear Glass Bottles and Containers - CRV	1.2%	0.6%	24,368
Clear Glass Bottles and Containers - Non-CRV	1.3%	0.6%	26,280
Green Glass Bottles and Containers - CRV	0.4%	0.2%	7,755
Green Glass Bottles and Containers - Non-CRV	1.4%	0.9%	28,955
Brown Glass Bottles and Containers - CRV	0.5%	0.2%	10,234
Brown Glass Bottles and Containers - Non-CRV	0.3%	0.2%	5,443
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	305
Flat Glass	0.0%	0.0%	6
Remainder/Composite Glass	0.1%	0.1%	1,450
Metal	**1.6%**		**32,370**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.1%	1,282
Tin/Steel Cans - Other	0.8%	0.3%	15,584
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.3%	0.2%	5,409
Aluminum Cans - CRV	0.2%	0.1%	3,709
Aluminum Cans - Non-CRV	0.1%	0.1%	1,672
Other Non-Ferrous	0.2%	0.2%	3,278
Remainder/Composite Metal	0.1%	0.0%	1,436
Electronics	**0.1%**		**2,401**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.1%	0.1%	1,853
Other Small Consumer Electronics	0.0%	0.0%	548
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**8.7%**		**173,986**
PETE Containers - CRV	0.6%	0.2%	12,446
PETE Containers - Non-CRV	0.8%	0.5%	16,945
HDPE Containers - CRV	0.0%	0.0%	849
HDPE Containers - Non-CRV	0.9%	0.4%	18,427
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	95
Miscellaneous Plastic Containers - Non-CRV	1.3%	1.4%	26,978
Plastic Trash Bags	0.3%	0.1%	5,514
Plastic Grocery and Other Merchandise Bags	0.4%	0.3%	7,256
Non-Bag Commercial and Industrial Packaging Film	0.9%	0.9%	18,306
Film Products	0.1%	0.1%	1,927
Other Film - Flexible Plastic Pouches	0.0%	0.0%	335
Other Film - Other	0.8%	0.3%	15,070
Durable Plastic Items - #2 and #5 Bulky Rigids	0.8%	0.5%	16,595
Durable Plastic Items - Other	0.4%	0.3%	8,823
Remainder/Composite Plastic	1.2%	0.5%	24,419

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**3.7%**		**73,494**
Food	1.7%	0.7%	34,272
Leaves and Grass	0.0%	0.0%	416
Prunings and Trimmings	0.3%	0.3%	6,269
Branches and Stumps	0.9%	1.1%	17,723
Manures	0.0%	0.0%	0
Textiles	0.2%	0.1%	3,990
Carpet	0.3%	0.5%	6,989
Remainder/Composite Organic	0.2%	0.2%	3,835
Inerts and Other	**1.7%**		**34,948**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	50
Clean Dimensional Lumber	0.5%	0.5%	10,668
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.9%	0.9%	18,139
Other Wood Waste	0.0%	0.0%	176
Gypsum Board	0.0%	0.0%	537
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.3%	0.2%	5,378
Household Hazardous Waste	**0.0%**		**734**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	404
Batteries	0.0%	0.0%	266
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	37
Remainder/Composite Household Hazardous	0.0%	0.0%	27
Special Waste	**0.1%**		**1,799**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	347
Bulky Items	0.0%	0.1%	715
Tires	0.0%	0.0%	40
Remainder/Composite Special Waste	0.0%	0.0%	698
Mixed Residue	**0.2%**	**0.2%**	**3,481**
Totals	**100%**		**2,001,671**
Sampled Streams	**338**		

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

Table 101. Detailed Composition – Curbside Organics: Overall Commercial Sector

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**1.1%**		**18,057**
Uncoated Corrugated Cardboard	0.2%	0.1%	3,198
Paper Bags	0.0%	0.0%	39
Newspaper	0.1%	0.1%	857
White Ledger Paper	0.0%	0.0%	48
Other Office Paper	0.0%	0.1%	414
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.5%	0.2%	7,988
Other Miscellaneous Paper - Other	0.0%	0.0%	622
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	587
Remainder/Composite Paper - Compostable	0.2%	0.3%	3,978
Remainder/Composite Paper - Other	0.0%	0.0%	327
Glass	**0.8%**		**13,898**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	424
Clear Glass Bottles and Containers - Non-CRV	0.3%	0.4%	4,628
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.4%	0.8%	7,325
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	397
Brown Glass Bottles and Containers - Non-CRV	0.1%	0.1%	1,125
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.1%**		**1,117**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	22
Tin/Steel Cans - Other	0.0%	0.0%	617
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	55
Aluminum Cans - CRV	0.0%	0.0%	84
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	334
Remainder/Composite Metal	0.0%	0.0%	4
Electronics	**0.0%**		**13**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	13
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.2%**		**3,795**
PETE Containers - CRV	0.0%	0.0%	432
PETE Containers - Non-CRV	0.0%	0.0%	165
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	78
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	298
Plastic Trash Bags	0.0%	0.0%	188
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	42
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	138
Film Products	0.0%	0.0%	25
Other Film - Flexible Plastic Pouches	0.0%	0.0%	3
Other Film - Other	0.1%	0.0%	1,980
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	57
Remainder/Composite Plastic	0.0%	0.0%	388

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**97.8%**		**1,666,288**
Food	15.6%	2.3%	265,021
Leaves and Grass	80.6%	3.6%	1,372,233
Prunings and Trimmings	1.7%	2.5%	28,412
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.1%	622
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**310**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.1%	310
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**14**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	14
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**1,703,492**
Sampled Streams	**41**		

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

Table 102. Detailed Composition – Other Diversion: Overall Commercial Sector

Material	Estimated Percent	Estimated Tons
Paper	**36.1%**	**2,052,884**
Uncoated Corrugated Cardboard	31.6%	1,800,463
Paper Bags	0.0%	296
Newspaper	0.0%	2,096
White Ledger Paper	0.6%	34,770
Other Office Paper	0.3%	16,999
Magazines and Catalogs	0.0%	1,966
Phone Books and Directories	0.0%	140
Other Miscellaneous Paper - Compostable	0.1%	3,226
Other Miscellaneous Paper - Other	3.1%	178,968
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	265
Remainder/Composite Paper - Compostable	0.2%	12,989
Remainder/Composite Paper - Other	0.0%	706
Glass	**1.4%**	**80,370**
Clear Glass Bottles and Containers - CRV	0.3%	14,338
Clear Glass Bottles and Containers - Non-CRV	0.1%	6,802
Green Glass Bottles and Containers - CRV	0.3%	16,152
Green Glass Bottles and Containers - Non-CRV	0.0%	39
Brown Glass Bottles and Containers - CRV	0.7%	39,455
Brown Glass Bottles and Containers - Non-CRV	0.1%	3,577
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	7
Metal	**29.6%**	**1,685,302**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	863
Tin/Steel Cans - Other	0.0%	2,399
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	22.9%	1,302,028
Aluminum Cans - CRV	0.1%	7,278
Aluminum Cans - Non-CRV	0.0%	154
Other Non-Ferrous	4.4%	251,361
Remainder/Composite Metal	2.1%	121,218
Electronics	**1.2%**	**68,519**
Brown Goods	0.0%	1,689
Computer-related Electronics	1.1%	63,018
Other Small Consumer Electronics	0.0%	137
Video Display Devices - CRT	0.0%	2,372
Video Display Devices - Other	0.0%	1,303
Plastic	**0.8%**	**45,584**
PETE Containers - CRV	0.2%	10,633
PETE Containers - Non-CRV	0.1%	3,028
HDPE Containers - CRV	0.0%	1,214
HDPE Containers - Non-CRV	0.0%	550
Miscellaneous Plastic Containers - CRV	0.0%	8
Miscellaneous Plastic Containers - Non-CRV	0.1%	3,863
Plastic Trash Bags	0.0%	935
Plastic Grocery and Other Merchandise Bags	0.0%	8
Non-Bag Commercial and Industrial Packaging Film	0.1%	7,512
Film Products	0.1%	4,303
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	1,741
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	2,179
Durable Plastic Items - Other	0.1%	3,332
Remainder/Composite Plastic	0.1%	6,279
Other Organic	**25.6%**	**1,459,333**
Food	16.3%	928,965
Leaves and Grass	2.6%	146,752
Prunings and Trimmings	6.3%	356,802
Branches and Stumps	0.3%	19,260
Manures	0.0%	0
Textiles	0.1%	7,536
Carpet	0.0%	17
Remainder/Composite Organic	0.0%	2
Inerts and Other	**5.1%**	**291,642**
Concrete	0.0%	718
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	2,830
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	4.4%	249,857
Other Wood Waste	0.0%	434
Gypsum Board	0.0%	642
Rock, Soil and Fines	0.6%	32,886
Remainder/Composite Inerts and Other	0.1%	4,275
Household Hazardous Waste	**0.0%**	**2,564**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	2,530
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	35
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.1%**	**4,665**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.1%	4,665
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**60**
Totals	**100%**	**5,690,924**
Sampled Streams	**720**	

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

Table 103. Detailed Composition – Disposed: Arts, Entertainment, & Recreation

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**20.9%**		**173,415**
Uncoated Corrugated Cardboard	2.0%	0.5%	16,236
Paper Bags	0.3%	0.1%	2,725
Newspaper	1.6%	0.5%	13,325
White Ledger Paper	0.6%	0.3%	5,186
Other Office Paper	0.8%	0.3%	6,872
Magazines and Catalogs	0.5%	0.3%	4,205
Phone Books and Directories	0.0%	0.0%	129
Other Miscellaneous Paper - Compostable	0.4%	0.3%	3,346
Other Miscellaneous Paper - Other	2.8%	0.7%	23,273
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.4%	0.4%	3,269
Remainder/Composite Paper - Compostable	9.4%	2.1%	78,350
Remainder/Composite Paper - Other	2.0%	0.7%	16,497
Glass	**3.1%**		**26,100**
Clear Glass Bottles and Containers - CRV	0.8%	0.4%	6,960
Clear Glass Bottles and Containers - Non-CRV	0.4%	0.2%	3,134
Green Glass Bottles and Containers - CRV	0.6%	0.5%	4,974
Green Glass Bottles and Containers - Non-CRV	0.4%	0.2%	3,008
Brown Glass Bottles and Containers - CRV	0.7%	0.5%	5,785
Brown Glass Bottles and Containers - Non-CRV	0.2%	0.3%	1,472
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	31
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	31
Flat Glass	0.0%	0.0%	24
Remainder/Composite Glass	0.1%	0.1%	681
Metal	**1.8%**		**15,055**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.1%	652
Tin/Steel Cans - Other	0.6%	0.2%	4,772
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.2%	0.1%	1,937
Aluminum Cans - CRV	0.3%	0.1%	2,207
Aluminum Cans - Non-CRV	0.0%	0.0%	198
Other Non-Ferrous	0.2%	0.1%	1,634
Remainder/Composite Metal	0.4%	0.2%	3,655
Electronics	**0.0%**		**202**
Brown Goods	0.0%	0.0%	171
Computer-related Electronics	0.0%	0.0%	31
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**13.8%**		**114,388**
PETE Containers - CRV	0.6%	0.2%	5,106
PETE Containers - Non-CRV	0.2%	0.0%	1,255
HDPE Containers - CRV	0.1%	0.0%	444
HDPE Containers - Non-CRV	0.2%	0.1%	1,836
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	328
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.1%	2,254
Plastic Trash Bags	2.5%	0.5%	21,065
Plastic Grocery and Other Merchandise Bags	0.2%	0.1%	1,419
Non-Bag Commercial and Industrial Packaging Film	0.4%	0.4%	3,466
Film Products	0.0%	0.0%	125
Other Film - Flexible Plastic Pouches	0.1%	0.0%	837
Other Film - Other	2.0%	0.5%	16,952
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.1%	1,796
Durable Plastic Items - Other	1.0%	0.8%	8,023
Remainder/Composite Plastic	6.0%	2.6%	49,479

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**52.9%**		**439,228**
Food	33.6%	6.3%	278,639
Leaves and Grass	5.8%	2.9%	48,015
Prunings and Trimmings	2.6%	1.3%	21,669
Branches and Stumps	3.3%	3.8%	27,490
Manures	0.1%	0.1%	526
Textiles	1.6%	0.4%	13,096
Carpet	1.0%	1.3%	8,546
Remainder/Composite Organic	5.0%	1.8%	41,247
Inerts and Other	**5.6%**		**46,731**
Concrete	1.7%	2.7%	14,400
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	218
Clean Dimensional Lumber	0.6%	1.0%	5,150
Clean Engineered Wood	0.3%	0.5%	2,457
Clean Pallets & Crates	0.3%	0.4%	2,161
Other Wood Waste	0.5%	0.4%	3,886
Gypsum Board	0.0%	0.0%	141
Rock, Soil and Fines	0.9%	0.7%	7,844
Remainder/Composite Inerts and Other	1.3%	1.2%	10,476
Household Hazardous Waste	**0.1%**		**682**
Paint	0.0%	0.0%	158
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	57
Batteries	0.0%	0.1%	379
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	88
Special Waste	**1.4%**		**12,017**
Ash	0.8%	1.1%	6,928
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.6%	0.8%	5,034
Tires	0.0%	0.0%	55
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.2%**	**0.3%**	**1,844**
Totals	**100%**		**829,661**
Sampled Streams	**54**		

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

Table 104. Detailed Composition – Curbside Recycle: Arts, Entertainment, & Recreation

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**67.1%**		**36,146**
Uncoated Corrugated Cardboard	52.4%	22.4%	28,249
Paper Bags	0.2%	0.2%	105
Newspaper	0.7%	0.8%	351
White Ledger Paper	2.1%	1.5%	1,120
Other Office Paper	2.6%	2.9%	1,403
Magazines and Catalogs	2.1%	2.2%	1,147
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	1.0%	0.9%	514
Other Miscellaneous Paper - Other	2.6%	1.3%	1,410
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.2%	76
Remainder/Composite Paper - Compostable	3.1%	3.7%	1,680
Remainder/Composite Paper - Other	0.2%	0.2%	92
Glass	**19.2%**		**10,334**
Clear Glass Bottles and Containers - CRV	1.4%	1.1%	744
Clear Glass Bottles and Containers - Non-CRV	4.0%	5.5%	2,176
Green Glass Bottles and Containers - CRV	0.7%	0.9%	362
Green Glass Bottles and Containers - Non-CRV	9.3%	12.8%	5,030
Brown Glass Bottles and Containers - CRV	3.3%	2.4%	1,780
Brown Glass Bottles and Containers - Non-CRV	0.4%	0.4%	242
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**2.5%**		**1,366**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	6
Tin/Steel Cans - Other	1.8%	1.5%	986
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.4%	0.4%	223
Aluminum Cans - Non-CRV	0.2%	0.4%	125
Other Non-Ferrous	0.0%	0.1%	26
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**6.7%**		**3,621**
PETE Containers - CRV	2.2%	2.2%	1,186
PETE Containers - Non-CRV	0.2%	0.3%	127
HDPE Containers - CRV	0.4%	0.5%	226
HDPE Containers - Non-CRV	0.7%	0.6%	366
Miscellaneous Plastic Containers - CRV	0.2%	0.3%	89
Miscellaneous Plastic Containers - Non-CRV	0.5%	0.5%	262
Plastic Trash Bags	0.9%	1.0%	465
Plastic Grocery and Other Merchandise Bags	0.2%	0.3%	109
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.1%	26
Film Products	0.2%	0.2%	99
Other Film - Flexible Plastic Pouches	0.1%	0.1%	53
Other Film - Other	0.8%	0.9%	431
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	0.1%	35
Durable Plastic Items - Other	0.0%	0.0%	6
Remainder/Composite Plastic	0.3%	0.2%	140
Other Organic	**2.8%**		**1,508**
Food	1.8%	1.8%	951
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.1%	0.1%	40
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.5%	0.7%	289
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.4%	0.7%	228
Inerts and Other	**0.3%**		**176**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.3%	0.6%	176
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**1.3%**		**715**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	1.3%	2.3%	715
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**53,865**
Sampled Streams	**17**		

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

Table 105. Detailed Composition – Curbside Organics: Arts, Entertainment, & Recreation

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**0.0%**		**0**
Uncoated Corrugated Cardboard	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0.0%	0
Other Miscellaneous Paper - Other	0.0%	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**0**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.0%**		**0**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**100.0%**		**8,439**
Food	0.0%	0.0%	0
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	100.0%	0.0%	8,439
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**8,439**
Sampled Streams	**1**		

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

Table 106. Detailed Composition – Other Diversion: Arts, Entertainment, & Recreation

Material	Estimated Percent	Estimated Tons
Paper	**1.2%**	**1,286**
Uncoated Corrugated Cardboard	0.4%	449
Paper Bags	0.0%	0
Newspaper	0.0%	0
White Ledger Paper	0.0%	0
Other Office Paper	0.0%	0
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.7%	750
Other Miscellaneous Paper - Other	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	87
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**5.0%**	**5,262**
Clear Glass Bottles and Containers - CRV	0.1%	79
Clear Glass Bottles and Containers - Non-CRV	0.2%	185
Green Glass Bottles and Containers - CRV	0.0%	8
Green Glass Bottles and Containers - Non-CRV	0.0%	26
Brown Glass Bottles and Containers - CRV	4.7%	4,958
Brown Glass Bottles and Containers - Non-CRV	0.0%	7
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**5.9%**	**6,211**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.2%	243
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	5.2%	5,538
Aluminum Cans - CRV	0.2%	171
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	0.2%	258
Remainder/Composite Metal	0.0%	0
Electronics	**1.6%**	**1,660**
Brown Goods	0.0%	0
Computer-related Electronics	1.4%	1,514
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.1%	146
Video Display Devices - Other	0.0%	0
Plastic	**1.6%**	**1,740**
PETE Containers - CRV	0.5%	490
PETE Containers - Non-CRV	0.0%	2
HDPE Containers - CRV	0.0%	39
HDPE Containers - Non-CRV	0.0%	2
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.2%	201
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	13
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.9%	927
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.1%	67

Material	Estimated Percent	Estimated Tons
Other Organic	**84.2%**	**89,053**
Food	23.6%	24,962
Leaves and Grass	22.6%	23,930
Prunings and Trimmings	19.9%	21,061
Branches and Stumps	18.1%	19,100
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**0.0%**	**0**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.0%	0
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.5%**	**520**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.5%	520
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**105,732**
Sampled Streams	**31**	

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

Table 107. Detailed Composition – Disposed: Durable Wholesale & Trucking

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**25.8%**		**98,563**
Uncoated Corrugated Cardboard	4.8%	1.8%	18,334
Paper Bags	0.4%	0.3%	1,582
Newspaper	1.0%	0.4%	3,944
White Ledger Paper	1.9%	0.5%	7,253
Other Office Paper	1.7%	0.5%	6,424
Magazines and Catalogs	0.5%	0.3%	2,066
Phone Books and Directories	0.1%	0.1%	271
Other Miscellaneous Paper - Compostable	0.5%	0.5%	1,968
Other Miscellaneous Paper - Other	3.9%	2.2%	15,057
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.0%	276
Remainder/Composite Paper - Compostable	6.5%	1.3%	24,689
Remainder/Composite Paper - Other	4.4%	1.3%	16,697
Glass	**1.6%**		**6,065**
Clear Glass Bottles and Containers - CRV	0.1%	0.1%	368
Clear Glass Bottles and Containers - Non-CRV	0.1%	0.1%	470
Green Glass Bottles and Containers - CRV	0.0%	0.0%	5
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	95
Brown Glass Bottles and Containers - CRV	0.2%	0.1%	625
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	13
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	1.1%	1.9%	4,343
Remainder/Composite Glass	0.0%	0.1%	146
Metal	**4.5%**		**17,117**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	85
Tin/Steel Cans - Other	0.1%	0.0%	341
Major Appliances	0.3%	0.5%	1,145
Used Oil Filters	0.1%	0.1%	208
Other Ferrous	1.0%	0.7%	3,729
Aluminum Cans - CRV	0.1%	0.0%	334
Aluminum Cans - Non-CRV	0.0%	0.0%	17
Other Non-Ferrous	0.9%	0.6%	3,560
Remainder/Composite Metal	2.0%	1.3%	7,699
Electronics	**0.7%**		**2,617**
Brown Goods	0.5%	0.6%	1,840
Computer-related Electronics	0.0%	0.0%	72
Other Small Consumer Electronics	0.2%	0.3%	705
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**13.7%**		**52,355**
PETE Containers - CRV	0.2%	0.0%	575
PETE Containers - Non-CRV	0.1%	0.0%	262
HDPE Containers - CRV	0.0%	0.0%	76
HDPE Containers - Non-CRV	0.1%	0.1%	536
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	97
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.2%	1,005
Plastic Trash Bags	2.5%	2.0%	9,624
Plastic Grocery and Other Merchandise Bags	0.2%	0.1%	617
Non-Bag Commercial and Industrial Packaging Film	1.4%	0.4%	5,307
Film Products	0.0%	0.0%	27
Other Film - Flexible Plastic Pouches	0.3%	0.3%	971
Other Film - Other	1.6%	0.7%	5,929
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	0.2%	505
Durable Plastic Items - Other	1.6%	1.3%	6,263
Remainder/Composite Plastic	5.4%	2.5%	20,562

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**18.3%**		**69,760**
Food	10.0%	4.1%	38,192
Leaves and Grass	1.9%	1.2%	7,138
Prunings and Trimmings	0.7%	0.6%	2,771
Branches and Stumps	0.7%	1.1%	2,599
Manures	0.0%	0.0%	0
Textiles	1.4%	0.5%	5,356
Carpet	0.3%	0.4%	1,320
Remainder/Composite Organic	3.2%	1.3%	12,384
Inerts and Other	**32.7%**		**124,766**
Concrete	1.7%	1.8%	6,515
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	1.6%	2.7%	6,171
Clean Dimensional Lumber	4.6%	2.9%	17,547
Clean Engineered Wood	2.3%	1.7%	8,688
Clean Pallets & Crates	13.3%	4.9%	50,937
Other Wood Waste	3.0%	1.7%	11,496
Gypsum Board	0.6%	1.0%	2,418
Rock, Soil and Fines	0.6%	0.6%	2,108
Remainder/Composite Inerts and Other	4.9%	3.8%	18,887
Household Hazardous Waste	**0.0%**		**146**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	72
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	74
Special Waste	**2.5%**		**9,622**
Ash	0.2%	0.3%	582
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	2.4%	2.2%	9,040
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.2%**	**0.3%**	**754**
Totals	**100%**		**381,767**
Sampled Streams	**52**		

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

Table 108. Detailed Composition – Curbside Recycle: Durable Wholesale & Trucking

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**91.3%**		**97,030**
Uncoated Corrugated Cardboard	67.5%	30.9%	71,750
Paper Bags	1.1%	1.8%	1,161
Newspaper	0.2%	0.3%	225
White Ledger Paper	7.5%	9.9%	8,004
Other Office Paper	6.4%	7.8%	6,790
Magazines and Catalogs	1.8%	2.3%	1,926
Phone Books and Directories	0.2%	0.3%	188
Other Miscellaneous Paper - Compostable	0.7%	1.1%	760
Other Miscellaneous Paper - Other	0.6%	0.8%	649
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	3.1%	4.4%	3,267
Remainder/Composite Paper - Other	2.2%	2.4%	2,310
Glass	**0.5%**		**500**
Clear Glass Bottles and Containers - CRV	0.3%	0.4%	325
Clear Glass Bottles and Containers - Non-CRV	0.1%	0.1%	60
Green Glass Bottles and Containers - CRV	0.1%	0.1%	64
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.1%	52
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**1.0%**		**1,029**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	36
Tin/Steel Cans - Other	0.2%	0.2%	166
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.3%	0.5%	344
Aluminum Cans - CRV	0.1%	0.1%	81
Aluminum Cans - Non-CRV	0.0%	0.1%	45
Other Non-Ferrous	0.1%	0.2%	156
Remainder/Composite Metal	0.2%	0.3%	200
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**4.9%**		**5,200**
PETE Containers - CRV	0.3%	0.5%	369
PETE Containers - Non-CRV	0.3%	0.3%	272
HDPE Containers - CRV	0.0%	0.1%	39
HDPE Containers - Non-CRV	0.2%	0.2%	201
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.3%	190
Plastic Trash Bags	0.2%	0.3%	211
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	19
Non-Bag Commercial and Industrial Packaging Film	2.8%	4.4%	2,952
Film Products	0.0%	0.0%	8
Other Film - Flexible Plastic Pouches	0.0%	0.0%	1
Other Film - Other	0.4%	0.5%	410
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.4%	0.7%	422
Remainder/Composite Plastic	0.1%	0.1%	105
Other Organic	**0.2%**		**256**
Food	0.2%	0.2%	217
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.1%	39
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**2.1%**	**4.0%**	**2,238**
Totals	**100%**		**106,253**
Sampled Streams	**14**		

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

Table 109. Detailed Composition – Curbside Organics: Durable Wholesale & Trucking

None of the selected Durable Wholesale & Trucking sites had a Curbside Organics stream.

Table 110. Detailed Composition – Other Diversion: Durable Wholesale & Trucking

Material	Estimated Percent	Estimated Tons
Paper	**22.1%**	**316,261**
Uncoated Corrugated Cardboard	21.6%	309,537
Paper Bags	0.0%	88
Newspaper	0.0%	715
White Ledger Paper	0.0%	416
Other Office Paper	0.2%	2,925
Magazines and Catalogs	0.0%	463
Phone Books and Directories	0.0%	140
Other Miscellaneous Paper - Compostable	0.0%	162
Other Miscellaneous Paper - Other	0.1%	1,535
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	18
Remainder/Composite Paper - Compostable	0.0%	232
Remainder/Composite Paper - Other	0.0%	32
Glass	**0.0%**	**143**
Clear Glass Bottles and Containers - CRV	0.0%	6
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	134
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	3
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**64.1%**	**918,341**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	18
Tin/Steel Cans - Other	0.0%	538
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	55.5%	795,354
Aluminum Cans - CRV	0.0%	85
Aluminum Cans - Non-CRV	0.0%	18
Other Non-Ferrous	0.6%	8,568
Remainder/Composite Metal	7.9%	113,760
Electronics	**3.6%**	**51,021**
Brown Goods	0.0%	3
Computer-related Electronics	3.5%	50,785
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.0%	233
Plastic	**0.1%**	**1,291**
PETE Containers - CRV	0.0%	563
PETE Containers - Non-CRV	0.0%	158
HDPE Containers - CRV	0.0%	16
HDPE Containers - Non-CRV	0.0%	367
Miscellaneous Plastic Containers - CRV	0.0%	6
Miscellaneous Plastic Containers - Non-CRV	0.0%	40
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	5
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	63
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	73
Other Organic	**9.3%**	**132,560**
Food	0.0%	355
Leaves and Grass	0.0%	0
Prunings and Trimmings	9.2%	132,188
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	17
Remainder/Composite Organic	0.0%	0
Inerts and Other	**0.9%**	**12,894**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.8%	11,211
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.1%	1,683
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**40**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	40
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**1,432,550**
Sampled Streams	**64**	

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

Table 111. Detailed Composition – Disposed: Education

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**33.3%**		**187,070**
Uncoated Corrugated Cardboard	1.2%	0.4%	6,936
Paper Bags	0.3%	0.1%	1,797
Newspaper	1.2%	0.4%	6,930
White Ledger Paper	3.5%	0.8%	19,892
Other Office Paper	3.7%	0.8%	20,791
Magazines and Catalogs	1.1%	0.4%	5,974
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.4%	0.3%	2,036
Other Miscellaneous Paper - Other	4.0%	1.0%	22,709
Remainder/Composite Paper - Rigid Food & Beverage Cartons	2.5%	0.6%	14,024
Remainder/Composite Paper - Compostable	12.8%	2.0%	71,730
Remainder/Composite Paper - Other	2.5%	0.8%	14,251
Glass	**0.5%**		**2,778**
Clear Glass Bottles and Containers - CRV	0.2%	0.1%	1,083
Clear Glass Bottles and Containers - Non-CRV	0.2%	0.1%	913
Green Glass Bottles and Containers - CRV	0.0%	0.0%	76
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	58
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.1%	0.1%	649
Metal	**1.6%**		**9,132**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	45
Tin/Steel Cans - Other	0.4%	0.2%	2,338
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	84
Other Ferrous	0.4%	0.3%	2,245
Aluminum Cans - CRV	0.1%	0.0%	592
Aluminum Cans - Non-CRV	0.1%	0.0%	332
Other Non-Ferrous	0.2%	0.1%	1,285
Remainder/Composite Metal	0.4%	0.3%	2,211
Electronics	**0.0%**		**269**
Brown Goods	0.0%	0.0%	168
Computer-related Electronics	0.0%	0.0%	102
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**13.1%**		**73,717**
PETE Containers - CRV	0.4%	0.1%	2,504
PETE Containers - Non-CRV	0.3%	0.1%	1,604
HDPE Containers - CRV	0.0%	0.0%	265
HDPE Containers - Non-CRV	0.2%	0.1%	1,247
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	93
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.1%	1,913
Plastic Trash Bags	3.2%	0.3%	18,121
Plastic Grocery and Other Merchandise Bags	0.2%	0.0%	892
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	783
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.2%	0.1%	1,335
Other Film - Other	1.7%	0.2%	9,656
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	0.1%	320
Durable Plastic Items - Other	0.9%	0.5%	4,953
Remainder/Composite Plastic	5.3%	0.8%	30,031

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**48.1%**		**270,695**
Food	33.8%	4.1%	189,957
Leaves and Grass	3.9%	2.4%	22,109
Prunings and Trimmings	0.3%	0.3%	1,663
Branches and Stumps	1.2%	1.4%	6,479
Manures	0.0%	0.0%	0
Textiles	1.9%	0.6%	10,550
Carpet	3.0%	2.5%	16,788
Remainder/Composite Organic	4.1%	1.1%	23,150
Inerts and Other	**2.8%**		**15,923**
Concrete	0.2%	0.4%	1,219
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	106
Clean Dimensional Lumber	0.1%	0.1%	561
Clean Engineered Wood	0.1%	0.2%	689
Clean Pallets & Crates	0.4%	0.7%	2,398
Other Wood Waste	1.3%	0.9%	7,516
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.2%	0.2%	1,095
Remainder/Composite Inerts and Other	0.4%	0.3%	2,339
Household Hazardous Waste	**0.2%**		**1,268**
Paint	0.0%	0.0%	62
Vehicle and Equipment Fluids	0.0%	0.0%	102
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	74
Mercury-Containing Items - Not Lamps	0.0%	0.0%	10
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.2%	0.2%	1,020
Special Waste	**0.0%**		**185**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.1%	185
Mixed Residue	**0.2%**	**0.2%**	**1,404**
Totals	**100%**		**562,442**
Sampled Streams	**51**		

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

Table 112. Detailed Composition – Curbside Recycle: Education

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**85.4%**		**54,586**
Uncoated Corrugated Cardboard	27.6%	12.4%	17,663
Paper Bags	0.5%	0.3%	294
Newspaper	2.1%	1.6%	1,366
White Ledger Paper	22.4%	8.3%	14,336
Other Office Paper	10.3%	4.2%	6,566
Magazines and Catalogs	6.2%	3.5%	3,952
Phone Books and Directories	0.5%	0.7%	317
Other Miscellaneous Paper - Compostable	6.5%	4.0%	4,146
Other Miscellaneous Paper - Other	7.0%	7.1%	4,454
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	3
Remainder/Composite Paper - Compostable	0.7%	0.9%	471
Remainder/Composite Paper - Other	1.6%	1.1%	1,018
Glass	**0.3%**		**219**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.2%	0.2%	109
Green Glass Bottles and Containers - CRV	0.2%	0.0%	103
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	7
Metal	**0.8%**		**501**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.1%	53
Tin/Steel Cans - Other	0.0%	0.0%	13
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.1%	0.1%	54
Aluminum Cans - CRV	0.6%	0.7%	371
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	10
Electronics	**1.8%**		**1,123**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	1.8%	2.8%	1,123
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**6.4%**		**4,107**
PETE Containers - CRV	1.5%	1.8%	975
PETE Containers - Non-CRV	0.9%	1.1%	566
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.1%	31
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.7%	0.7%	441
Plastic Trash Bags	0.0%	0.0%	27
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	23
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	52
Film Products	0.4%	0.6%	252
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	1.2%	0.9%	767
Durable Plastic Items - #2 and #5 Bulky Rigids	0.9%	1.1%	594
Durable Plastic Items - Other	0.3%	0.3%	205
Remainder/Composite Plastic	0.3%	0.3%	174
Other Organic	**4.9%**		**3,105**
Food	0.4%	0.4%	235
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	4.2%	5.3%	2,715
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.2%	0.3%	155
Inerts and Other	**0.4%**		**249**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.4%	0.0%	249
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**63,891**
Sampled Streams	**24**		

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

Table 113. Detailed Composition – Curbside Organics: Education

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**5.9%**		**584**
Uncoated Corrugated Cardboard	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	2.1%	0.2%	205
Other Miscellaneous Paper - Other	3.8%	2.3%	375
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	4
Remainder/Composite Paper - Compostable	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**0**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.2%**		**18**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.1%	18
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0
Other Organic	**93.9%**		**9,307**
Food	75.9%	45.8%	7,521
Leaves and Grass	9.0%	24.2%	893
Prunings and Trimmings	9.0%	24.2%	893
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**9,909**
Sampled Streams	**3**		

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

Table 114. Detailed Composition – Other Diversion: Education

Material	Estimated Percent	Estimated Tons
Paper	**30.1%**	**7,262**
Uncoated Corrugated Cardboard	11.4%	2,757
Paper Bags	0.2%	52
Newspaper	0.5%	131
White Ledger Paper	8.5%	2,040
Other Office Paper	1.9%	449
Magazines and Catalogs	2.6%	624
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	4.6%	1,105
Other Miscellaneous Paper - Other	0.4%	93
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	1
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	8
Glass	**0.2%**	**42**
Clear Glass Bottles and Containers - CRV	0.2%	40
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	2
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**42.0%**	**10,128**
Tin/Steel Cans - CRV Bimetal Containers	3.4%	812
Tin/Steel Cans - Other	0.1%	24
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	32.4%	7,806
Aluminum Cans - CRV	5.8%	1,399
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	0.4%	87
Remainder/Composite Metal	0.0%	0
Electronics	**5.1%**	**1,235**
Brown Goods	0.0%	0
Computer-related Electronics	3.3%	798
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.8%	190
Video Display Devices - Other	1.0%	248
Plastic	**16.5%**	**3,972**
PETE Containers - CRV	15.5%	3,746
PETE Containers - Non-CRV	0.1%	21
HDPE Containers - CRV	0.8%	198
HDPE Containers - Non-CRV	0.0%	6
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	1
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	0
Other Organic	**6.0%**	**1,455**
Food	2.0%	485
Leaves and Grass	4.0%	971
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**0.0%**	**0**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.0%	0
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.1%**	**32**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.1%	32
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**24,127**
Sampled Streams	**39**	

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

Table 115. Detailed Composition – Disposed: Hotels & Lodging

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**22.3%**		**85,791**
Uncoated Corrugated Cardboard	2.0%	0.5%	7,538
Paper Bags	0.5%	0.1%	1,815
Newspaper	2.6%	0.5%	10,001
White Ledger Paper	0.9%	0.3%	3,596
Other Office Paper	0.9%	0.4%	3,463
Magazines and Catalogs	0.6%	0.2%	2,287
Phone Books and Directories	0.1%	0.1%	291
Other Miscellaneous Paper - Compostable	0.8%	0.4%	3,106
Other Miscellaneous Paper - Other	2.7%	0.6%	10,188
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.4%	0.2%	1,417
Remainder/Composite Paper - Compostable	9.0%	1.3%	34,549
Remainder/Composite Paper - Other	2.0%	0.7%	7,540
Glass	**6.7%**		**25,897**
Clear Glass Bottles and Containers - CRV	0.9%	0.3%	3,431
Clear Glass Bottles and Containers - Non-CRV	1.0%	0.6%	3,947
Green Glass Bottles and Containers - CRV	0.5%	0.2%	1,844
Green Glass Bottles and Containers - Non-CRV	1.9%	1.6%	7,474
Brown Glass Bottles and Containers - CRV	1.0%	0.4%	3,785
Brown Glass Bottles and Containers - Non-CRV	0.1%	0.1%	450
Other Colored Glass Bottles and Containers - CRV	0.1%	0.1%	278
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	51
Flat Glass	0.4%	0.5%	1,657
Remainder/Composite Glass	0.8%	0.7%	2,981
Metal	**4.1%**		**15,621**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.0%	287
Tin/Steel Cans - Other	1.0%	1.1%	3,851
Major Appliances	0.6%	0.9%	2,188
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.5%	0.3%	2,012
Aluminum Cans - CRV	0.3%	0.1%	1,004
Aluminum Cans - Non-CRV	0.1%	0.0%	237
Other Non-Ferrous	0.4%	0.3%	1,713
Remainder/Composite Metal	1.1%	0.7%	4,329
Electronics	**0.0%**		**63**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	25
Other Small Consumer Electronics	0.0%	0.0%	38
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**11.2%**		**43,226**
PETE Containers - CRV	0.7%	0.2%	2,647
PETE Containers - Non-CRV	0.3%	0.1%	1,227
HDPE Containers - CRV	0.1%	0.0%	259
HDPE Containers - Non-CRV	0.6%	0.3%	2,367
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	71
Miscellaneous Plastic Containers - Non-CRV	0.4%	0.1%	1,394
Plastic Trash Bags	2.8%	0.5%	10,766
Plastic Grocery and Other Merchandise Bags	0.3%	0.1%	1,196
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.0%	272
Film Products	0.0%	0.0%	49
Other Film - Flexible Plastic Pouches	0.0%	0.0%	192
Other Film - Other	1.7%	0.3%	6,445
Durable Plastic Items - #2 and #5 Bulky Rigids	0.3%	0.2%	1,104
Durable Plastic Items - Other	0.4%	0.2%	1,694
Remainder/Composite Plastic	3.5%	0.6%	13,546

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**45.5%**		**174,892**
Food	32.1%	4.5%	123,483
Leaves and Grass	2.1%	1.5%	8,042
Prunings and Trimmings	2.1%	1.8%	8,248
Branches and Stumps	1.7%	1.9%	6,635
Manures	0.0%	0.0%	0
Textiles	2.6%	0.6%	9,941
Carpet	0.5%	0.4%	1,909
Remainder/Composite Organic	4.3%	0.9%	16,634
Inerts and Other	**8.5%**		**32,718**
Concrete	0.2%	0.3%	656
Asphalt Paving	1.7%	2.1%	6,692
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.1%	0.1%	264
Clean Engineered Wood	0.1%	0.1%	376
Clean Pallets & Crates	2.2%	1.6%	8,476
Other Wood Waste	1.1%	0.8%	4,225
Gypsum Board	1.4%	2.2%	5,542
Rock, Soil and Fines	0.2%	0.2%	635
Remainder/Composite Inerts and Other	1.5%	1.3%	5,852
Household Hazardous Waste	**0.1%**		**207**
Paint	0.0%	0.0%	46
Vehicle and Equipment Fluids	0.0%	0.0%	6
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	40
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	64
Remainder/Composite Household Hazardous	0.0%	0.0%	51
Special Waste	**1.1%**		**4,362**
Ash	0.8%	1.2%	2,926
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.4%	0.6%	1,407
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	29
Mixed Residue	**0.4%**	**0.3%**	**1,550**
Totals	**100%**		**384,327**
Sampled Streams	**51**		

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

Table 116. Detailed Composition – Curbside Recycle: Hotels & Lodging

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**49.2%**		**24,543**
Uncoated Corrugated Cardboard	29.5%	8.4%	14,729
Paper Bags	0.4%	0.2%	189
Newspaper	4.4%	2.5%	2,190
White Ledger Paper	1.6%	1.4%	779
Other Office Paper	3.5%	5.4%	1,725
Magazines and Catalogs	3.5%	5.3%	1,762
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	1.2%	0.7%	596
Other Miscellaneous Paper - Other	2.7%	1.2%	1,331
Remainder/Composite Paper - Rigid Food & Beverage Cartons	1.1%	1.9%	536
Remainder/Composite Paper - Compostable	0.8%	0.9%	412
Remainder/Composite Paper - Other	0.6%	0.5%	295
Glass	**7.9%**		**3,932**
Clear Glass Bottles and Containers - CRV	1.1%	1.0%	532
Clear Glass Bottles and Containers - Non-CRV	1.5%	1.1%	740
Green Glass Bottles and Containers - CRV	1.3%	1.6%	674
Green Glass Bottles and Containers - Non-CRV	1.9%	1.2%	941
Brown Glass Bottles and Containers - CRV	1.4%	1.0%	681
Brown Glass Bottles and Containers - Non-CRV	0.7%	0.8%	359
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	6
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**2.1%**		**1,032**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	5
Tin/Steel Cans - Other	0.2%	0.2%	86
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	1.3%	2.2%	666
Aluminum Cans - CRV	0.2%	0.1%	82
Aluminum Cans - Non-CRV	0.0%	0.0%	5
Other Non-Ferrous	0.3%	0.5%	165
Remainder/Composite Metal	0.0%	0.1%	23
Electronics	**0.0%**		**25**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.1%	25
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**11.5%**		**5,753**
PETE Containers - CRV	0.6%	0.4%	319
PETE Containers - Non-CRV	0.9%	0.7%	426
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	1.3%	1.4%	635
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.2%	107
Plastic Trash Bags	0.7%	0.8%	364
Plastic Grocery and Other Merchandise Bags	0.1%	0.1%	44
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	37
Film Products	0.0%	0.0%	8
Other Film - Flexible Plastic Pouches	0.0%	0.0%	9
Other Film - Other	3.8%	3.9%	1,882
Durable Plastic Items - #2 and #5 Bulky Rigids	0.7%	0.8%	374
Durable Plastic Items - Other	2.1%	3.1%	1,051
Remainder/Composite Plastic	1.0%	1.1%	498
Other Organic	**5.4%**		**2,700**
Food	5.2%	8.6%	2,605
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.2%	0.1%	96
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**23.8%**		**11,897**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.6%	1.0%	286
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	14.5%	16.1%	7,230
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	8.8%	9.7%	4,381
Household Hazardous Waste	**0.0%**		**6**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	1
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	1
Remainder/Composite Household Hazardous	0.0%	0.0%	4
Special Waste	**0.1%**		**40**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.1%	0.1%	40
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**49,930**
Sampled Streams	**23**		

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

Table 117. Detailed Composition – Curbside Organics: Hotels & Lodging

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**0.0%**		**0**
Uncoated Corrugated Cardboard	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0.0%	0
Other Miscellaneous Paper - Other	0.0%	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**0**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.0%**		**0**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**100.0%**		**3,293**
Food	54.0%	49.7%	1,780
Leaves and Grass	25.0%	0.0%	822
Prunings and Trimmings	21.0%	49.7%	691
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**3,293**
Sampled Streams	**3**		

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

Table 118. Detailed Composition – Other Diversion: Hotels & Lodging

Material	Estimated Percent	Estimated Tons
Paper	**31.3%**	**12,689**
Uncoated Corrugated Cardboard	30.5%	12,347
Paper Bags	0.0%	0
Newspaper	0.0%	0
White Ledger Paper	0.0%	0
Other Office Paper	0.0%	0
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.8%	342
Remainder/Composite Paper - Other	0.0%	0
Glass	**25.1%**	**10,148**
Clear Glass Bottles and Containers - CRV	22.5%	9,091
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.2%	86
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	2.4%	971
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**10.3%**	**4,168**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.0%	0
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	8.2%	3,307
Aluminum Cans - CRV	2.1%	858
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	0.0%	0
Remainder/Composite Metal	0.0%	3
Electronics	**2.3%**	**915**
Brown Goods	0.0%	3
Computer-related Electronics	2.2%	889
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	19
Video Display Devices - Other	0.0%	4
Plastic	**3.6%**	**1,454**
PETE Containers - CRV	3.2%	1,300
PETE Containers - Non-CRV	0.0%	0
HDPE Containers - CRV	0.2%	74
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.2%	80
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	0
Other Organic	**27.1%**	**10,981**
Food	13.6%	5,496
Leaves and Grass	0.0%	0
Prunings and Trimmings	12.7%	5,136
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.9%	350
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**0.0%**	**0**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.0%	0
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.2%**	**73**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.2%	73
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.1%**	**60**
Totals	**100%**	**40,489**
Sampled Streams	**41**	

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

Table 119. Detailed Composition – Disposed: Manufacturing – Electronic Equipment

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**30.1%**		**27,438**
Uncoated Corrugated Cardboard	3.2%	0.8%	2,928
Paper Bags	0.3%	0.1%	251
Newspaper	1.6%	0.7%	1,415
White Ledger Paper	2.4%	0.8%	2,214
Other Office Paper	1.8%	0.5%	1,661
Magazines and Catalogs	0.7%	0.3%	670
Phone Books and Directories	0.0%	0.0%	14
Other Miscellaneous Paper - Compostable	0.9%	0.6%	819
Other Miscellaneous Paper - Other	2.9%	0.9%	2,679
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.3%	0.2%	231
Remainder/Composite Paper - Compostable	13.1%	3.0%	11,945
Remainder/Composite Paper - Other	2.9%	1.3%	2,610
Glass	**0.3%**		**261**
Clear Glass Bottles and Containers - CRV	0.1%	0.1%	135
Clear Glass Bottles and Containers - Non-CRV	0.1%	0.0%	70
Green Glass Bottles and Containers - CRV	0.0%	0.0%	5
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	2
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	2
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	8
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	40
Metal	**3.8%**		**3,458**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	8
Tin/Steel Cans - Other	0.1%	0.1%	130
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	9
Other Ferrous	0.8%	0.8%	689
Aluminum Cans - CRV	0.1%	0.1%	100
Aluminum Cans - Non-CRV	0.0%	0.0%	17
Other Non-Ferrous	1.4%	1.6%	1,235
Remainder/Composite Metal	1.4%	0.7%	1,271
Electronics	**1.5%**		**1,381**
Brown Goods	1.2%	2.0%	1,115
Computer-related Electronics	0.2%	0.3%	176
Other Small Consumer Electronics	0.0%	0.0%	8
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.1%	0.1%	81
Plastic	**18.8%**		**17,115**
PETE Containers - CRV	0.2%	0.1%	157
PETE Containers - Non-CRV	0.1%	0.0%	60
HDPE Containers - CRV	0.0%	0.0%	9
HDPE Containers - Non-CRV	0.3%	0.3%	302
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	36
Miscellaneous Plastic Containers - Non-CRV	0.5%	0.2%	421
Plastic Trash Bags	2.3%	0.6%	2,136
Plastic Grocery and Other Merchandise Bags	0.1%	0.0%	98
Non-Bag Commercial and Industrial Packaging Film	1.5%	1.1%	1,389
Film Products	0.2%	0.3%	206
Other Film - Flexible Plastic Pouches	0.1%	0.1%	55
Other Film - Other	2.8%	1.4%	2,590
Durable Plastic Items - #2 and #5 Bulky Rigids	0.3%	0.3%	275
Durable Plastic Items - Other	3.3%	4.0%	2,967
Remainder/Composite Plastic	7.0%	3.3%	6,414

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**21.3%**		**19,479**
Food	11.3%	3.7%	10,310
Leaves and Grass	2.8%	2.4%	2,524
Prunings and Trimmings	0.6%	0.5%	518
Branches and Stumps	0.0%	0.0%	4
Manures	0.0%	0.0%	0
Textiles	1.8%	0.6%	1,618
Carpet	0.1%	0.1%	70
Remainder/Composite Organic	4.9%	3.9%	4,436
Inerts and Other	**20.7%**		**18,935**
Concrete	0.5%	0.7%	413
Asphalt Paving	0.0%	0.1%	45
Asphalt Roofing	0.4%	0.7%	391
Clean Dimensional Lumber	2.0%	1.7%	1,867
Clean Engineered Wood	0.2%	0.2%	152
Clean Pallets & Crates	10.5%	6.2%	9,598
Other Wood Waste	4.4%	2.0%	4,057
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	1.8%	1.5%	1,603
Remainder/Composite Inerts and Other	0.9%	0.8%	811
Household Hazardous Waste	**0.8%**		**755**
Paint	0.5%	0.8%	456
Vehicle and Equipment Fluids	0.0%	0.0%	12
Used Oil	0.0%	0.0%	0
Batteries	0.1%	0.2%	99
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	6
Remainder/Composite Household Hazardous	0.2%	0.3%	183
Special Waste	**2.7%**		**2,444**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	2.7%	2.2%	2,442
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	1
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**91,265**
Sampled Streams	**51**		

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

Table 120. Detailed Composition – Curbside Recycle: Manufacturing – Electronic Equipment

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**93.8%**		**19,709**
Uncoated Corrugated Cardboard	81.8%	15.0%	17,203
Paper Bags	2.1%	2.0%	451
Newspaper	0.1%	0.1%	24
White Ledger Paper	1.7%	1.4%	347
Other Office Paper	2.3%	3.2%	476
Magazines and Catalogs	0.7%	0.9%	138
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	2.8%	4.5%	597
Other Miscellaneous Paper - Other	0.8%	0.7%	164
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	1
Remainder/Composite Paper - Compostable	0.8%	1.1%	166
Remainder/Composite Paper - Other	0.7%	1.2%	142
Glass	**0.3%**		**58**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	5
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.1%	0.3%	30
Brown Glass Bottles and Containers - CRV	0.1%	0.2%	24
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.1%**		**24**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	5
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	3
Aluminum Cans - CRV	0.0%	0.0%	2
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	1
Remainder/Composite Metal	0.1%	0.1%	13
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**5.6%**		**1,184**
PETE Containers - CRV	0.3%	0.6%	69
PETE Containers - Non-CRV	0.1%	0.1%	19
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.1%	0.2%	26
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.2%	36
Plastic Trash Bags	0.1%	0.1%	29
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	3
Non-Bag Commercial and Industrial Packaging Film	0.3%	0.4%	63
Film Products	0.0%	0.1%	7
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.9%	1.4%	182
Durable Plastic Items - #2 and #5 Bulky Rigids	0.8%	1.2%	171
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	2.8%	4.3%	580
Other Organic	**0.2%**		**44**
Food	0.1%	0.2%	31
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	3
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.1%	10
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**21,020**
Sampled Streams	**19**		

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

Table 121. Detailed Composition – Curbside Organics: Manufacturing – Electronic Equipment

None of the selected Manufacturing – Electronic Equipment sites had a Curbside Organics stream.

Table 122. Detailed Composition – Other Diversion: Manufacturing – Electronic Equipment

Material	Estimated Percent	Estimated Tons
Paper	**6.8%**	**7,071**
Uncoated Corrugated Cardboard	5.2%	5,415
Paper Bags	0.0%	36
Newspaper	0.2%	231
White Ledger Paper	0.3%	331
Other Office Paper	0.3%	307
Magazines and Catalogs	0.1%	106
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	4
Other Miscellaneous Paper - Other	0.4%	415
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	1
Remainder/Composite Paper - Compostable	0.2%	225
Remainder/Composite Paper - Other	0.0%	0
Glass	**0.1%**	**77**
Clear Glass Bottles and Containers - CRV	0.0%	39
Clear Glass Bottles and Containers - Non-CRV	0.0%	30
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	7
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**65.0%**	**68,050**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	1
Tin/Steel Cans - Other	0.1%	84
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	29.4%	30,726
Aluminum Cans - CRV	0.0%	40
Aluminum Cans - Non-CRV	0.0%	2
Other Non-Ferrous	35.4%	37,072
Remainder/Composite Metal	0.1%	125
Electronics	**2.5%**	**2,633**
Brown Goods	1.6%	1,627
Computer-related Electronics	0.7%	689
Other Small Consumer Electronics	0.0%	20
Video Display Devices - CRT	0.2%	166
Video Display Devices - Other	0.1%	130
Plastic	**4.2%**	**4,348**
PETE Containers - CRV	0.0%	37
PETE Containers - Non-CRV	0.0%	10
HDPE Containers - CRV	0.0%	3
HDPE Containers - Non-CRV	0.0%	34
Miscellaneous Plastic Containers - CRV	0.0%	2
Miscellaneous Plastic Containers - Non-CRV	2.6%	2,675
Plastic Trash Bags	0.0%	12
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	6
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	2
Durable Plastic Items - Other	1.5%	1,561
Remainder/Composite Plastic	0.0%	5
Other Organic	**5.1%**	**5,388**
Food	1.9%	1,981
Leaves and Grass	2.6%	2,676
Prunings and Trimmings	0.5%	572
Branches and Stumps	0.2%	160
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**16.1%**	**16,845**
Concrete	0.3%	318
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	2.4%	2,501
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	11.7%	12,211
Other Wood Waste	0.4%	415
Gypsum Board	0.0%	0
Rock, Soil and Fines	1.3%	1,400
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.2%**	**234**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.2%	234
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**104,646**
Sampled Streams	**72**	

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

Table 123. Detailed Composition – Disposed: Manufacturing – Food & Nondurable Wholesale

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**23.1%**		**134,277**
Uncoated Corrugated Cardboard	3.4%	1.1%	19,650
Paper Bags	0.4%	0.1%	2,049
Newspaper	0.8%	0.3%	4,523
White Ledger Paper	1.2%	0.5%	7,177
Other Office Paper	1.5%	0.6%	8,568
Magazines and Catalogs	0.4%	0.2%	2,162
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.7%	0.5%	4,187
Other Miscellaneous Paper - Other	3.3%	1.4%	19,170
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.0%	468
Remainder/Composite Paper - Compostable	7.8%	1.5%	45,184
Remainder/Composite Paper - Other	3.6%	1.2%	21,140
Glass	**1.4%**		**8,216**
Clear Glass Bottles and Containers - CRV	0.3%	0.2%	1,476
Clear Glass Bottles and Containers - Non-CRV	0.6%	0.6%	3,204
Green Glass Bottles and Containers - CRV	0.2%	0.1%	993
Green Glass Bottles and Containers - Non-CRV	0.0%	0.1%	259
Brown Glass Bottles and Containers - CRV	0.2%	0.2%	927
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	67
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.2%	0.2%	1,291
Metal	**1.5%**		**8,868**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	187
Tin/Steel Cans - Other	0.4%	0.3%	2,510
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	11
Other Ferrous	0.1%	0.1%	703
Aluminum Cans - CRV	0.1%	0.0%	607
Aluminum Cans - Non-CRV	0.0%	0.0%	35
Other Non-Ferrous	0.3%	0.3%	1,833
Remainder/Composite Metal	0.5%	0.4%	2,982
Electronics	**0.8%**		**4,583**
Brown Goods	0.7%	0.8%	3,872
Computer-related Electronics	0.0%	0.0%	218
Other Small Consumer Electronics	0.1%	0.1%	493
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**17.0%**		**99,055**
PETE Containers - CRV	0.2%	0.2%	1,438
PETE Containers - Non-CRV	0.2%	0.2%	1,312
HDPE Containers - CRV	0.0%	0.0%	99
HDPE Containers - Non-CRV	0.3%	0.2%	1,768
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	21
Miscellaneous Plastic Containers - Non-CRV	0.6%	0.7%	3,392
Plastic Trash Bags	1.6%	0.3%	9,153
Plastic Grocery and Other Merchandise Bags	0.1%	0.0%	461
Non-Bag Commercial and Industrial Packaging Film	3.9%	2.0%	22,574
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	249
Other Film - Other	5.6%	3.1%	32,345
Durable Plastic Items - #2 and #5 Bulky Rigids	0.7%	0.5%	4,167
Durable Plastic Items - Other	0.3%	0.2%	2,006
Remainder/Composite Plastic	3.4%	1.0%	20,070

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**47.1%**		**274,475**
Food	37.8%	6.7%	220,403
Leaves and Grass	3.8%	3.0%	22,170
Prunings and Trimmings	0.1%	0.2%	837
Branches and Stumps	0.3%	0.5%	1,878
Manures	0.0%	0.0%	0
Textiles	1.3%	0.5%	7,473
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	3.7%	2.3%	21,714
Inerts and Other	**8.1%**		**47,024**
Concrete	0.3%	0.5%	1,768
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.6%	0.6%	3,330
Clean Engineered Wood	1.1%	1.5%	6,332
Clean Pallets & Crates	4.0%	1.8%	23,205
Other Wood Waste	1.1%	0.8%	6,261
Gypsum Board	0.1%	0.1%	393
Rock, Soil and Fines	0.8%	1.0%	4,445
Remainder/Composite Inerts and Other	0.2%	0.2%	1,290
Household Hazardous Waste	**0.3%**		**1,504**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	119
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.2%	0.4%	1,385
Special Waste	**0.7%**		**4,254**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.7%	1.2%	4,238
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	17
Mixed Residue	**0.0%**	**0.1%**	**229**
Totals	**100%**		**582,486**
Sampled Streams	**53**		

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

Table 124. Detailed Composition – Curbside Recycle: Manufacturing – Food & Nondurable Wholesale

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**69.2%**		**15,058**
Uncoated Corrugated Cardboard	42.1%	11.7%	9,158
Paper Bags	0.3%	0.3%	67
Newspaper	1.5%	1.5%	327
White Ledger Paper	6.8%	6.6%	1,477
Other Office Paper	2.6%	2.4%	573
Magazines and Catalogs	5.2%	6.3%	1,135
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	1.0%	1.0%	209
Other Miscellaneous Paper - Other	8.1%	5.9%	1,769
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	3
Remainder/Composite Paper - Compostable	0.2%	0.2%	40
Remainder/Composite Paper - Other	1.4%	1.2%	301
Glass	**11.6%**		**2,526**
Clear Glass Bottles and Containers - CRV	0.3%	0.4%	71
Clear Glass Bottles and Containers - Non-CRV	3.4%	5.5%	733
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	5.4%	5.7%	1,180
Brown Glass Bottles and Containers - CRV	1.4%	1.5%	298
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	2
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	1.1%	1.9%	243
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.5%**		**102**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.1%	0.1%	30
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.2%	0.3%	33
Aluminum Cans - CRV	0.1%	0.1%	32
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	7
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**4**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	4
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**17.7%**		**3,849**
PETE Containers - CRV	0.9%	1.1%	197
PETE Containers - Non-CRV	5.8%	8.8%	1,265
HDPE Containers - CRV	0.0%	0.0%	6
HDPE Containers - Non-CRV	0.2%	0.2%	36
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.9%	1.1%	196
Plastic Trash Bags	0.2%	0.2%	40
Plastic Grocery and Other Merchandise Bags	0.1%	0.2%	27
Non-Bag Commercial and Industrial Packaging Film	3.4%	2.9%	736
Film Products	0.6%	1.0%	121
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.6%	0.8%	137
Durable Plastic Items - #2 and #5 Bulky Rigids	1.5%	1.9%	337
Durable Plastic Items - Other	2.6%	4.2%	569
Remainder/Composite Plastic	0.8%	0.7%	183

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**0.9%**		**207**
Food	0.7%	1.0%	155
Leaves and Grass	0.0%	0.0%	5
Prunings and Trimmings	0.0%	0.0%	2
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.2%	0.2%	44
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.1%**		**22**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.1%	0.2%	22
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**21,768**
Sampled Streams	**17**		

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

Table 125. Detailed Composition – Curbside Organics: Manufacturing – Food & Nondurable Wholesale

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**2.2%**		**119**
Uncoated Corrugated Cardboard	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	1.8%	0.5%	95
Other Miscellaneous Paper - Other	0.2%	0.1%	10
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.3%	0.1%	14
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.1%**		**4**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.1%	0.0%	4
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.0%**		**0**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**92.0%**		**4,958**
Food	89.4%	23.2%	4,821
Leaves and Grass	2.5%	6.1%	136
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**5.8%**		**310**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	5.8%	17.4%	310
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**5,392**
Sampled Streams	**4**		

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

Table 126. Detailed Composition – Other Diversion: Manufacturing – Food & Nondurable Wholesale

Material	Estimated Percent	Estimated Tons
Paper	**4.5%**	**10,666**
Uncoated Corrugated Cardboard	4.3%	10,192
Paper Bags	0.0%	2
Newspaper	0.0%	0
White Ledger Paper	0.0%	63
Other Office Paper	0.0%	28
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	0.2%	381
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**0.0%**	**0**
Clear Glass Bottles and Containers - CRV	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**1.1%**	**2,538**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.0%	36
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	1.1%	2,495
Aluminum Cans - CRV	0.0%	7
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	0.0%	0
Remainder/Composite Metal	0.0%	0
Electronics	**0.0%**	**108**
Brown Goods	0.0%	0
Computer-related Electronics	0.0%	106
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	1
Video Display Devices - Other	0.0%	0
Plastic	**0.2%**	**555**
PETE Containers - CRV	0.0%	2
PETE Containers - Non-CRV	0.0%	0
HDPE Containers - CRV	0.0%	0
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	51
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	503
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	0
Other Organic	**71.2%**	**166,880**
Food	68.1%	159,682
Leaves and Grass	3.1%	7,197
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**22.9%**	**53,660**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	22.7%	53,288
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.2%	373
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**78**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	78
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**234,486**
Sampled Streams	**43**	

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

Table 127. Detailed Composition – Disposed: Manufacturing – All Other

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**25.1%**		**96,612**
Uncoated Corrugated Cardboard	4.4%	2.5%	16,996
Paper Bags	0.3%	0.1%	989
Newspaper	0.6%	0.3%	2,387
White Ledger Paper	2.7%	1.1%	10,472
Other Office Paper	1.9%	0.9%	7,363
Magazines and Catalogs	0.6%	0.3%	2,185
Phone Books and Directories	0.1%	0.2%	470
Other Miscellaneous Paper - Compostable	0.6%	0.8%	2,229
Other Miscellaneous Paper - Other	2.8%	0.8%	10,913
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.2%	0.2%	619
Remainder/Composite Paper - Compostable	7.7%	1.6%	29,777
Remainder/Composite Paper - Other	3.2%	1.3%	12,213
Glass	**0.6%**		**2,168**
Clear Glass Bottles and Containers - CRV	0.1%	0.1%	441
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	70
Green Glass Bottles and Containers - CRV	0.0%	0.0%	27
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	86
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	98
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.1%	191
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.3%	0.5%	1,144
Remainder/Composite Glass	0.0%	0.0%	111
Metal	**8.5%**		**32,592**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	85
Tin/Steel Cans - Other	0.3%	0.2%	1,006
Major Appliances	0.5%	0.8%	1,907
Used Oil Filters	0.0%	0.0%	54
Other Ferrous	4.7%	2.7%	18,172
Aluminum Cans - CRV	0.1%	0.0%	417
Aluminum Cans - Non-CRV	0.0%	0.0%	121
Other Non-Ferrous	2.2%	2.4%	8,358
Remainder/Composite Metal	0.6%	0.4%	2,473
Electronics	**0.6%**		**2,283**
Brown Goods	0.2%	0.4%	835
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.4%	0.6%	1,448
Plastic	**13.6%**		**52,142**
PETE Containers - CRV	0.3%	0.1%	967
PETE Containers - Non-CRV	0.1%	0.0%	216
HDPE Containers - CRV	0.1%	0.1%	260
HDPE Containers - Non-CRV	0.2%	0.1%	906
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	47
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.1%	673
Plastic Trash Bags	1.2%	0.3%	4,705
Plastic Grocery and Other Merchandise Bags	0.1%	0.1%	542
Non-Bag Commercial and Industrial Packaging Film	1.9%	0.8%	7,167
Film Products	0.0%	0.1%	168
Other Film - Flexible Plastic Pouches	0.0%	0.0%	46
Other Film - Other	1.6%	0.6%	6,127
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.1%	633
Durable Plastic Items - Other	1.0%	0.9%	3,905
Remainder/Composite Plastic	6.7%	2.7%	25,780
Other Organic	**20.3%**		**78,076**
Food	7.0%	1.9%	26,907
Leaves and Grass	0.8%	0.8%	3,185
Prunings and Trimmings	0.7%	1.0%	2,541
Branches and Stumps	1.5%	1.8%	5,840
Manures	0.0%	0.0%	0
Textiles	4.4%	3.3%	17,024
Carpet	0.4%	0.6%	1,433
Remainder/Composite Organic	5.5%	2.2%	21,146
Inerts and Other	**28.3%**		**108,633**
Concrete	0.4%	0.7%	1,726
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	2
Clean Dimensional Lumber	4.9%	3.0%	18,804
Clean Engineered Wood	0.9%	0.8%	3,444
Clean Pallets & Crates	5.6%	3.3%	21,632
Other Wood Waste	8.2%	4.3%	31,430
Gypsum Board	1.4%	1.5%	5,215
Rock, Soil and Fines	0.7%	0.9%	2,568
Remainder/Composite Inerts and Other	6.2%	3.6%	23,810
Household Hazardous Waste	**0.9%**		**3,476**
Paint	0.8%	0.8%	2,930
Vehicle and Equipment Fluids	0.0%	0.0%	83
Used Oil	0.0%	0.0%	7
Batteries	0.0%	0.0%	53
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.1%	0.2%	403
Special Waste	**2.2%**		**8,310**
Ash	0.0%	0.0%	86
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	1.9%	2.3%	7,269
Tires	0.2%	0.4%	956
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**384,292**
Sampled Streams	**53**		

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

Table 128. Detailed Composition – Curbside Recycle: Manufacturing – All Other

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**81.9%**		**72,799**
Uncoated Corrugated Cardboard	28.4%	16.7%	25,254
Paper Bags	0.7%	0.7%	612
Newspaper	0.7%	1.4%	666
White Ledger Paper	3.5%	4.4%	3,086
Other Office Paper	30.8%	33.4%	27,354
Magazines and Catalogs	11.2%	7.1%	9,969
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	5.4%	7.2%	4,803
Other Miscellaneous Paper - Other	0.6%	0.8%	517
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	15
Remainder/Composite Paper - Compostable	0.1%	0.1%	52
Remainder/Composite Paper - Other	0.5%	0.6%	471
Glass	**0.1%**		**102**
Clear Glass Bottles and Containers - CRV	0.0%	0.1%	32
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.1%	43
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	27
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.4%**		**386**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.4%	0.5%	364
Aluminum Cans - CRV	0.0%	0.0%	15
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	7
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**4.9%**		**4,383**
PETE Containers - CRV	0.2%	0.2%	190
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	5
HDPE Containers - Non-CRV	0.2%	0.2%	151
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.5%	0.5%	403
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	18
Non-Bag Commercial and Industrial Packaging Film	0.7%	0.8%	592
Film Products	0.0%	0.0%	1
Other Film - Flexible Plastic Pouches	0.2%	0.3%	163
Other Film - Other	1.3%	1.5%	1,172
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.3%	165
Durable Plastic Items - Other	1.6%	2.4%	1,395
Remainder/Composite Plastic	0.1%	0.1%	128
Other Organic	**0.6%**		**497**
Food	0.1%	0.1%	73
Leaves and Grass	0.5%	0.6%	411
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	14
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**11.2%**		**9,994**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	11.2%	11.6%	9,994
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**11**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	11
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.8%**	**1.5%**	**695**
Totals	**100%**		**88,868**
Sampled Streams	**17**		

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

Table 129. Detailed Composition – Curbside Organics: Manufacturing – All Other

None of the selected Manufacturing – All Other sites had a Curbside Organics stream.

Table 130. Detailed Composition – Other Diversion: Manufacturing – All Other

Material	Estimated Percent	Estimated Tons
Paper	**29.4%**	**234,258**
Uncoated Corrugated Cardboard	5.2%	41,146
Paper Bags	0.0%	0
Newspaper	0.0%	0
White Ledger Paper	3.3%	26,503
Other Office Paper	0.1%	454
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	20.8%	165,973
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	182
Glass	**0.1%**	**490**
Clear Glass Bottles and Containers - CRV	0.0%	343
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	147
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**66.2%**	**527,081**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	6
Tin/Steel Cans - Other	0.0%	0
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	44.1%	351,011
Aluminum Cans - CRV	0.0%	210
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	22.1%	175,854
Remainder/Composite Metal	0.0%	0
Electronics	**0.4%**	**3,256**
Brown Goods	0.0%	0
Computer-related Electronics	0.3%	2,352
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	362
Video Display Devices - Other	0.1%	541
Plastic	**0.6%**	**4,774**
PETE Containers - CRV	0.1%	588
PETE Containers - Non-CRV	0.0%	0
HDPE Containers - CRV	0.0%	23
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	90
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	10
Durable Plastic Items - Other	0.1%	466
Remainder/Composite Plastic	0.5%	3,596
Other Organic	**0.0%**	**0**
Food	0.0%	0
Leaves and Grass	0.0%	0
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**3.4%**	**26,859**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	3.4%	26,859
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**1**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	1
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**796,718**
Sampled Streams	**74**	

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

Table 131. Detailed Composition – Disposed: Medical & Health

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**25.9%**		**259,993**
Uncoated Corrugated Cardboard	1.9%	0.6%	18,676
Paper Bags	0.2%	0.0%	1,801
Newspaper	2.5%	0.6%	24,923
White Ledger Paper	1.4%	0.4%	14,281
Other Office Paper	1.9%	0.5%	19,249
Magazines and Catalogs	0.6%	0.3%	5,632
Phone Books and Directories	0.2%	0.3%	1,916
Other Miscellaneous Paper - Compostable	0.1%	0.1%	1,192
Other Miscellaneous Paper - Other	2.6%	0.5%	25,585
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.6%	0.4%	5,525
Remainder/Composite Paper - Compostable	10.9%	2.7%	109,841
Remainder/Composite Paper - Other	3.1%	1.8%	31,373
Glass	**0.5%**		**4,805**
Clear Glass Bottles and Containers - CRV	0.2%	0.1%	1,692
Clear Glass Bottles and Containers - Non-CRV	0.1%	0.1%	820
Green Glass Bottles and Containers - CRV	0.0%	0.0%	293
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	145
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	206
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	222
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	19
Flat Glass	0.0%	0.0%	214
Remainder/Composite Glass	0.1%	0.1%	1,193
Metal	**1.6%**		**15,997**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	222
Tin/Steel Cans - Other	0.7%	0.3%	7,261
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.2%	0.1%	2,222
Aluminum Cans - CRV	0.1%	0.1%	1,419
Aluminum Cans - Non-CRV	0.0%	0.0%	333
Other Non-Ferrous	0.2%	0.1%	1,668
Remainder/Composite Metal	0.3%	0.4%	2,872
Electronics	**0.2%**		**2,379**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.2%	0.4%	2,379
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**9.4%**		**94,240**
PETE Containers - CRV	0.2%	0.0%	2,025
PETE Containers - Non-CRV	0.1%	0.0%	1,151
HDPE Containers - CRV	0.1%	0.1%	1,282
HDPE Containers - Non-CRV	0.4%	0.1%	4,416
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	383
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.1%	3,416
Plastic Trash Bags	2.7%	0.4%	27,308
Plastic Grocery and Other Merchandise Bags	0.2%	0.1%	1,513
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.1%	482
Film Products	0.0%	0.0%	46
Other Film - Flexible Plastic Pouches	0.0%	0.0%	198
Other Film - Other	1.9%	0.8%	19,229
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	202
Durable Plastic Items - Other	0.4%	0.2%	3,879
Remainder/Composite Plastic	2.9%	0.6%	28,711

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**54.6%**		**548,122**
Food	21.6%	2.7%	216,983
Leaves and Grass	2.6%	1.6%	26,201
Prunings and Trimmings	1.5%	2.0%	15,048
Branches and Stumps	0.0%	0.0%	0
Manures	1.1%	1.0%	10,763
Textiles	2.3%	0.8%	23,161
Carpet	1.7%	1.7%	16,583
Remainder/Composite Organic	23.9%	3.7%	239,384
Inerts and Other	**3.0%**		**29,736**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	2
Clean Engineered Wood	0.1%	0.1%	798
Clean Pallets & Crates	1.6%	1.7%	15,611
Other Wood Waste	0.8%	0.9%	7,603
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.6%	0.9%	5,611
Remainder/Composite Inerts and Other	0.0%	0.0%	111
Household Hazardous Waste	**0.1%**		**968**
Paint	0.0%	0.0%	18
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	24
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	7
Remainder/Composite Household Hazardous	0.1%	0.1%	918
Special Waste	**2.0%**		**19,589**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.4%	0.4%	3,963
Bulky Items	0.3%	0.5%	2,782
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	1.3%	0.8%	12,844
Mixed Residue	**2.7%**	**2.5%**	**27,487**
Totals	**100%**		**1,003,316**
Sampled Streams	**55**		

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

Table 132. Detailed Composition – Curbside Recycle: Medical & Health

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**90.0%**		**67,359**
Uncoated Corrugated Cardboard	60.3%	6.7%	45,116
Paper Bags	0.6%	0.5%	474
Newspaper	6.2%	4.6%	4,670
White Ledger Paper	5.1%	3.8%	3,822
Other Office Paper	7.1%	4.0%	5,319
Magazines and Catalogs	5.4%	1.9%	4,068
Phone Books and Directories	0.0%	0.0%	14
Other Miscellaneous Paper - Compostable	1.0%	1.0%	738
Other Miscellaneous Paper - Other	2.7%	1.3%	2,046
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.5%	0.4%	395
Remainder/Composite Paper - Compostable	0.3%	0.3%	219
Remainder/Composite Paper - Other	0.6%	0.3%	478
Glass	**0.4%**		**264**
Clear Glass Bottles and Containers - CRV	0.1%	0.2%	104
Clear Glass Bottles and Containers - Non-CRV	0.1%	0.2%	76
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.1%	0.2%	62
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	22
Metal	**2.1%**		**1,577**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.1%	28
Tin/Steel Cans - Other	0.8%	0.6%	588
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	1
Aluminum Cans - CRV	0.1%	0.0%	53
Aluminum Cans - Non-CRV	1.1%	2.1%	860
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.1%	0.1%	47
Electronics	**0.1%**		**80**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.1%	0.2%	80
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**5.4%**		**4,040**
PETE Containers - CRV	0.1%	0.1%	100
PETE Containers - Non-CRV	0.4%	0.3%	302
HDPE Containers - CRV	0.4%	0.6%	273
HDPE Containers - Non-CRV	1.5%	0.9%	1,118
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.4%	0.3%	315
Plastic Trash Bags	0.4%	0.2%	266
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	23
Non-Bag Commercial and Industrial Packaging Film	0.2%	0.2%	143
Film Products	0.1%	0.1%	49
Other Film - Flexible Plastic Pouches	0.0%	0.0%	2
Other Film - Other	0.4%	0.1%	328
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.3%	113
Durable Plastic Items - Other	0.3%	0.5%	252
Remainder/Composite Plastic	1.0%	0.5%	755
Other Organic	**1.3%**		**943**
Food	1.2%	1.5%	915
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	20
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	9
Inerts and Other	**0.1%**		**39**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.1%	0.1%	39
Household Hazardous Waste	**0.0%**		**11**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	11
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.5%**		**410**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.5%	1.0%	410
Mixed Residue	**0.2%**	**0.2%**	**151**
Totals	**100%**		**74,874**
Sampled Streams	**29**		

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

Table 133. Detailed Composition – Curbside Organics: Medical & Health

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**10.4%**		**822**
Uncoated Corrugated Cardboard	0.2%	0.0%	16
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.1%	0.0%	5
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	3.4%	0.7%	269
Other Miscellaneous Paper - Other	2.4%	0.5%	191
Remainder/Composite Paper - Rigid Food & Beverage Cartons	4.3%	0.9%	341
Remainder/Composite Paper - Compostable	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**4.0%**		**317**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	3.7%	0.8%	291
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.3%	0.1%	25
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**9.9%**		**781**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.1%	0.0%	10
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.8%	0.2%	62
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	1.0%	0.2%	81
Plastic Trash Bags	0.1%	0.0%	10
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	3
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.3%	0.1%	25
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	2.8%	0.6%	225
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	4.6%	0.9%	365

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**75.7%**		**5,989**
Food	69.5%	14.2%	5,498
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	6.2%	19.2%	491
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**7,909**
Sampled Streams	**2**		

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

Table 134. Detailed Composition – Other Diversion: Medical & Health

Material	Estimated Percent	Estimated Tons
Paper	**0.4%**	**43**
Uncoated Corrugated Cardboard	0.4%	38
Paper Bags	0.0%	1
Newspaper	0.0%	0
White Ledger Paper	0.0%	1
Other Office Paper	0.0%	0
Magazines and Catalogs	0.0%	1
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	0.0%	2
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**0.0%**	**0**
Clear Glass Bottles and Containers - CRV	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**0.1%**	**8**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	1
Tin/Steel Cans - Other	0.0%	2
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	0.0%	0
Aluminum Cans - CRV	0.0%	5
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	0.0%	0
Remainder/Composite Metal	0.0%	0
Electronics	**12.9%**	**1,400**
Brown Goods	0.0%	0
Computer-related Electronics	12.9%	1,400
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.0%	0
Plastic	**0.0%**	**2**
PETE Containers - CRV	0.0%	1
PETE Containers - Non-CRV	0.0%	0
HDPE Containers - CRV	0.0%	1
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	1

Material	Estimated Percent	Estimated Tons
Other Organic	**59.2%**	**6,422**
Food	0.2%	20
Leaves and Grass	0.0%	0
Prunings and Trimmings	0.1%	7
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	59.0%	6,394
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**0.0%**	**0**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.0%	0
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**27.4%**	**2,971**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	27.4%	2,971
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**10,846**
Sampled Streams	**31**	

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

Table 135. Detailed Composition – Disposed: Public Administration

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**34.7%**		**90,050**
Uncoated Corrugated Cardboard	2.8%	1.2%	7,172
Paper Bags	0.3%	0.1%	871
Newspaper	2.3%	0.5%	6,051
White Ledger Paper	3.4%	1.1%	8,795
Other Office Paper	3.4%	1.1%	8,938
Magazines and Catalogs	1.2%	0.5%	3,037
Phone Books and Directories	0.1%	0.1%	203
Other Miscellaneous Paper - Compostable	0.3%	0.2%	771
Other Miscellaneous Paper - Other	3.4%	0.6%	8,842
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.7%	0.6%	1,816
Remainder/Composite Paper - Compostable	14.4%	2.5%	37,208
Remainder/Composite Paper - Other	2.4%	0.5%	6,345
Glass	**0.9%**		**2,341**
Clear Glass Bottles and Containers - CRV	0.2%	0.1%	617
Clear Glass Bottles and Containers - Non-CRV	0.1%	0.0%	341
Green Glass Bottles and Containers - CRV	0.0%	0.0%	43
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	83
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	110
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	30
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	7
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	56
Flat Glass	0.0%	0.0%	12
Remainder/Composite Glass	0.4%	0.3%	1,042
Metal	**7.2%**		**18,682**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	100
Tin/Steel Cans - Other	0.5%	0.2%	1,346
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	33
Other Ferrous	1.5%	1.7%	3,893
Aluminum Cans - CRV	0.2%	0.0%	443
Aluminum Cans - Non-CRV	0.0%	0.0%	54
Other Non-Ferrous	1.0%	0.6%	2,565
Remainder/Composite Metal	4.0%	2.6%	10,249
Electronics	**0.1%**		**351**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.1%	0.2%	339
Other Small Consumer Electronics	0.0%	0.0%	13
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**13.3%**		**34,392**
PETE Containers - CRV	0.4%	0.1%	955
PETE Containers - Non-CRV	0.2%	0.0%	446
HDPE Containers - CRV	0.1%	0.0%	155
HDPE Containers - Non-CRV	0.3%	0.1%	895
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	108
Miscellaneous Plastic Containers - Non-CRV	0.5%	0.2%	1,276
Plastic Trash Bags	2.8%	0.4%	7,204
Plastic Grocery and Other Merchandise Bags	0.2%	0.1%	603
Non-Bag Commercial and Industrial Packaging Film	0.2%	0.2%	607
Film Products	0.0%	0.0%	2
Other Film - Flexible Plastic Pouches	0.0%	0.0%	92
Other Film - Other	1.5%	0.3%	3,924
Durable Plastic Items - #2 and #5 Bulky Rigids	0.5%	0.4%	1,365
Durable Plastic Items - Other	1.9%	1.0%	4,928
Remainder/Composite Plastic	4.6%	1.3%	11,832

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**28.0%**		**72,599**
Food	17.2%	3.1%	44,508
Leaves and Grass	2.4%	1.5%	6,191
Prunings and Trimmings	0.1%	0.1%	263
Branches and Stumps	0.0%	0.1%	125
Manures	0.0%	0.0%	0
Textiles	2.5%	0.8%	6,494
Carpet	0.7%	0.7%	1,888
Remainder/Composite Organic	5.1%	1.4%	13,130
Inerts and Other	**14.0%**		**36,234**
Concrete	1.6%	1.7%	4,193
Asphalt Paving	0.4%	0.6%	949
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.7%	0.7%	1,822
Clean Engineered Wood	0.6%	0.6%	1,561
Clean Pallets & Crates	5.2%	2.8%	13,416
Other Wood Waste	2.2%	1.5%	5,775
Gypsum Board	0.2%	0.2%	476
Rock, Soil and Fines	0.5%	0.5%	1,323
Remainder/Composite Inerts and Other	2.6%	2.0%	6,719
Household Hazardous Waste	**0.1%**		**359**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	48
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.1%	0.1%	311
Special Waste	**0.0%**		**83**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	83
Mixed Residue	**1.6%**	**1.9%**	**4,046**
Totals	**100%**		**259,137**
Sampled Streams	**51**		

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

Table 136. Detailed Composition – Curbside Recycle: Public Administration

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**88.8%**		**30,409**
Uncoated Corrugated Cardboard	20.1%	9.9%	6,894
Paper Bags	0.3%	0.3%	113
Newspaper	2.2%	1.5%	757
White Ledger Paper	43.4%	16.1%	14,846
Other Office Paper	11.0%	7.5%	3,751
Magazines and Catalogs	6.2%	2.7%	2,133
Phone Books and Directories	0.4%	0.7%	146
Other Miscellaneous Paper - Compostable	0.2%	0.3%	85
Other Miscellaneous Paper - Other	2.1%	1.2%	728
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.1%	39
Remainder/Composite Paper - Compostable	1.8%	1.9%	599
Remainder/Composite Paper - Other	0.9%	0.9%	320
Glass	**0.8%**		**272**
Clear Glass Bottles and Containers - CRV	0.2%	0.2%	68
Clear Glass Bottles and Containers - Non-CRV	0.6%	0.9%	205
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**1.4%**		**466**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.1%	0.1%	41
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.2%	0.2%	78
Aluminum Cans - CRV	0.2%	0.1%	53
Aluminum Cans - Non-CRV	0.0%	0.0%	7
Other Non-Ferrous	0.0%	0.0%	2
Remainder/Composite Metal	0.8%	1.3%	285
Electronics	**0.3%**		**111**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.3%	0.5%	111
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**7.5%**		**2,577**
PETE Containers - CRV	0.7%	0.7%	239
PETE Containers - Non-CRV	0.3%	0.3%	118
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	4.9%	6.8%	1,664
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.1%	0.1%	32
Plastic Trash Bags	0.4%	0.3%	140
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	12
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	11
Film Products	0.1%	0.1%	26
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.2%	0.2%	63
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	11
Durable Plastic Items - Other	0.0%	0.1%	12
Remainder/Composite Plastic	0.7%	0.5%	250
Other Organic	**0.1%**		**28**
Food	0.1%	0.1%	27
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**8**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	8
Special Waste	**1.0%**		**347**
Ash	0.0%	0.0%	0
Treated Medical Waste	1.0%	1.6%	347
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**9**
Totals	**100%**		**34,225**
Sampled Streams	**28**		

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

Table 137. Detailed Composition – Curbside Organics: Public Administration

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**28.4%**		**1,053**
Uncoated Corrugated Cardboard	5.9%	6.0%	220
Paper Bags	0.1%	0.3%	6
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	19.8%	35.5%	733
Other Miscellaneous Paper - Other	0.6%	1.3%	23
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	1.7%	1.9%	64
Remainder/Composite Paper - Other	0.2%	0.2%	7
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**0**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.6%**		**23**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.2%	0.3%	7
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.4%	0.6%	16

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**71.0%**		**2,634**
Food	23.9%	38.5%	886
Leaves and Grass	47.0%	47.9%	1,743
Prunings and Trimmings	0.1%	0.3%	5
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**3,710**
Sampled Streams	**5**		

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

Table 138. Detailed Composition – Other Diversion: Public Administration

Material	Estimated Percent	Estimated Tons
Paper	**27.2%**	**3,381**
Uncoated Corrugated Cardboard	0.0%	0
Paper Bags	0.0%	0
Newspaper	1.8%	227
White Ledger Paper	0.7%	81
Other Office Paper	23.4%	2,903
Magazines and Catalogs	0.7%	84
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.6%	69
Other Miscellaneous Paper - Other	0.1%	18
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**0.1%**	**15**
Clear Glass Bottles and Containers - CRV	0.1%	15
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**55.2%**	**6,861**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.0%	1
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	52.2%	6,478
Aluminum Cans - CRV	0.2%	24
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	2.9%	358
Remainder/Composite Metal	0.0%	0
Electronics	**2.7%**	**339**
Brown Goods	0.0%	0
Computer-related Electronics	2.7%	339
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.0%	0
Plastic	**0.9%**	**109**
PETE Containers - CRV	0.5%	68
PETE Containers - Non-CRV	0.0%	5
HDPE Containers - CRV	0.0%	0
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	1
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	3
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	5
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.1%	9
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.1%	17
Other Organic	**1.4%**	**174**
Food	0.3%	40
Leaves and Grass	0.0%	0
Prunings and Trimmings	1.1%	134
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**11.2%**	**1,385**
Concrete	3.2%	399
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.0%	0
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	7.9%	985
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**1.2%**	**155**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	1.2%	155
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**12,419**
Sampled Streams	**33**	

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

Table 139. Detailed Composition – Disposed: Restaurants

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**25.9%**		**746,481**
Uncoated Corrugated Cardboard	2.0%	0.5%	56,636
Paper Bags	0.3%	0.1%	8,983
Newspaper	2.6%	1.4%	76,093
White Ledger Paper	0.7%	0.4%	19,631
Other Office Paper	0.3%	0.2%	9,087
Magazines and Catalogs	0.2%	0.2%	6,468
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.6%	0.4%	16,158
Other Miscellaneous Paper - Other	2.1%	0.4%	59,722
Remainder/Composite Paper - Rigid Food & Beverage Cartons	1.1%	0.8%	31,324
Remainder/Composite Paper - Compostable	12.2%	1.8%	350,240
Remainder/Composite Paper - Other	3.9%	1.5%	112,138
Glass	**2.7%**		**79,059**
Clear Glass Bottles and Containers - CRV	0.5%	0.3%	14,271
Clear Glass Bottles and Containers - Non-CRV	1.1%	0.9%	31,450
Green Glass Bottles and Containers - CRV	0.1%	0.0%	1,641
Green Glass Bottles and Containers - Non-CRV	0.4%	0.3%	12,671
Brown Glass Bottles and Containers - CRV	0.4%	0.2%	11,052
Brown Glass Bottles and Containers - Non-CRV	0.1%	0.1%	2,629
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	59
Remainder/Composite Glass	0.2%	0.1%	5,286
Metal	**2.1%**		**61,208**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.1%	2,661
Tin/Steel Cans - Other	1.0%	0.4%	28,713
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.4%	0.3%	12,115
Aluminum Cans - CRV	0.1%	0.0%	3,355
Aluminum Cans - Non-CRV	0.0%	0.0%	802
Other Non-Ferrous	0.2%	0.1%	5,191
Remainder/Composite Metal	0.3%	0.2%	8,371
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**12.2%**		**350,384**
PETE Containers - CRV	0.2%	0.1%	6,978
PETE Containers - Non-CRV	0.4%	0.2%	10,196
HDPE Containers - CRV	0.1%	0.0%	1,836
HDPE Containers - Non-CRV	0.5%	0.2%	15,803
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	327
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.1%	10,036
Plastic Trash Bags	3.3%	0.4%	94,146
Plastic Grocery and Other Merchandise Bags	0.1%	0.0%	3,587
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	936
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.1%	0.0%	2,500
Other Film - Other	3.2%	0.6%	91,503
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	929
Durable Plastic Items - Other	0.2%	0.2%	6,590
Remainder/Composite Plastic	3.7%	0.9%	105,016
Other Organic	**54.9%**		**1,580,144**
Food	50.8%	4.0%	1,461,319
Leaves and Grass	1.8%	1.9%	53,140
Prunings and Trimmings	0.4%	0.4%	10,440
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.7%	0.3%	20,721
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	1.2%	0.5%	34,524
Inerts and Other	**1.3%**		**36,294**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.8%	0.7%	21,613
Other Wood Waste	0.4%	0.7%	12,652
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.1%	1,118
Remainder/Composite Inerts and Other	0.0%	0.1%	912
Household Hazardous Waste	**0.0%**		**441**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	59
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	382
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.6%**		**18,495**
Ash	0.6%	1.0%	18,495
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.1%**	**0.2%**	**4,147**
Totals	**100%**		**2,876,653**
Sampled Streams	**51**		

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

Table 140. Detailed Composition – Curbside Recycle: Restaurants

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**68.1%**		**215,250**
Uncoated Corrugated Cardboard	61.3%	11.0%	193,718
Paper Bags	0.3%	0.4%	1,006
Newspaper	0.3%	0.4%	884
White Ledger Paper	0.4%	0.4%	1,145
Other Office Paper	0.6%	0.6%	1,872
Magazines and Catalogs	0.4%	0.3%	1,183
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	1.5%	0.8%	4,834
Other Miscellaneous Paper - Other	1.8%	2.2%	5,808
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.2%	419
Remainder/Composite Paper - Compostable	0.9%	0.6%	2,870
Remainder/Composite Paper - Other	0.5%	0.4%	1,510
Glass	**12.0%**		**37,982**
Clear Glass Bottles and Containers - CRV	3.3%	2.6%	10,413
Clear Glass Bottles and Containers - Non-CRV	1.9%	1.3%	5,915
Green Glass Bottles and Containers - CRV	1.4%	1.1%	4,464
Green Glass Bottles and Containers - Non-CRV	4.0%	5.1%	12,656
Brown Glass Bottles and Containers - CRV	0.7%	0.6%	2,298
Brown Glass Bottles and Containers - Non-CRV	0.6%	0.8%	1,783
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.1%	0.2%	452
Metal	**2.8%**		**8,738**
Tin/Steel Cans - CRV Bimetal Containers	0.2%	0.3%	702
Tin/Steel Cans - Other	2.2%	1.6%	6,913
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.2%	0.1%	697
Aluminum Cans - Non-CRV	0.0%	0.0%	51
Other Non-Ferrous	0.1%	0.1%	260
Remainder/Composite Metal	0.0%	0.1%	115
Electronics	**0.0%**		**134**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.1%	134
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**9.8%**		**30,907**
PETE Containers - CRV	0.3%	0.2%	1,002
PETE Containers - Non-CRV	2.3%	3.2%	7,305
HDPE Containers - CRV	0.1%	0.1%	194
HDPE Containers - Non-CRV	2.5%	2.0%	7,771
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.8%	0.8%	2,497
Plastic Trash Bags	0.3%	0.2%	1,040
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	124
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	349
Film Products	0.0%	0.0%	92
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	1.4%	1.4%	4,414
Durable Plastic Items - #2 and #5 Bulky Rigids	1.4%	1.5%	4,272
Durable Plastic Items - Other	0.0%	0.0%	119
Remainder/Composite Plastic	0.5%	0.4%	1,727

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**7.2%**		**22,903**
Food	5.6%	4.1%	17,706
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	1.1%	1.8%	3,512
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.5%	1.0%	1,685
Inerts and Other	**0.1%**		**319**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.1%	0.2%	319
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**316,231**
Sampled Streams	**21**		

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

Table 141. Detailed Composition – Curbside Organics: Restaurants

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**2.9%**		**5,852**
Uncoated Corrugated Cardboard	1.0%	1.0%	2,074
Paper Bags	0.0%	0.0%	0
Newspaper	0.4%	0.7%	750
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.9%	1.5%	1,897
Other Miscellaneous Paper - Other	0.0%	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.2%	243
Remainder/Composite Paper - Compostable	0.3%	0.4%	568
Remainder/Composite Paper - Other	0.2%	0.2%	320
Glass	**6.8%**		**13,866**
Clear Glass Bottles and Containers - CRV	0.2%	0.3%	392
Clear Glass Bottles and Containers - Non-CRV	2.3%	3.6%	4,628
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	3.6%	6.7%	7,325
Brown Glass Bottles and Containers - CRV	0.2%	0.2%	397
Brown Glass Bottles and Containers - Non-CRV	0.6%	1.0%	1,125
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.4%**		**717**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	22
Tin/Steel Cans - Other	0.2%	0.2%	325
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	55
Aluminum Cans - CRV	0.0%	0.0%	61
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.1%	0.2%	254
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**1.2%**		**2,452**
PETE Containers - CRV	0.2%	0.2%	325
PETE Containers - Non-CRV	0.1%	0.1%	110
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.1%	0.1%	116
Plastic Trash Bags	0.1%	0.1%	121
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	138
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.8%	0.3%	1,636
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	6

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**88.7%**		**179,540**
Food	73.2%	19.0%	148,160
Leaves and Grass	15.3%	21.2%	30,876
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.2%	0.4%	505
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**202,428**
Sampled Streams	**6**		

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

Table 142. Detailed Composition – Other Diversion: Restaurants

Material	Estimated Percent	Estimated Tons
Paper	**20.4%**	**20,228**
Uncoated Corrugated Cardboard	19.5%	19,353
Paper Bags	0.0%	0
Newspaper	0.4%	410
White Ledger Paper	0.1%	101
Other Office Paper	0.0%	0
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	0.4%	365
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**54.6%**	**54,175**
Clear Glass Bottles and Containers - CRV	0.1%	104
Clear Glass Bottles and Containers - Non-CRV	5.8%	5,771
Green Glass Bottles and Containers - CRV	13.4%	13,239
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	31.8%	31,491
Brown Glass Bottles and Containers - Non-CRV	3.6%	3,570
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**4.0%**	**3,986**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	1.4%	1,418
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	0.1%	77
Aluminum Cans - CRV	2.4%	2,370
Aluminum Cans - Non-CRV	0.1%	121
Other Non-Ferrous	0.0%	0
Remainder/Composite Metal	0.0%	0
Electronics	**0.1%**	**66**
Brown Goods	0.0%	0
Computer-related Electronics	0.1%	66
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.0%	0
Plastic	**0.2%**	**165**
PETE Containers - CRV	0.1%	76
PETE Containers - Non-CRV	0.0%	10
HDPE Containers - CRV	0.0%	0
HDPE Containers - Non-CRV	0.0%	27
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	52
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	0

Material	Estimated Percent	Estimated Tons
Other Organic	**20.7%**	**20,545**
Food	20.7%	20,545
Leaves and Grass	0.0%	0
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**0.0%**	**0**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.0%	0
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**99,167**
Sampled Streams	**18**	

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

Table 143. Detailed Composition – Disposed: Retail Trade – Food & Beverage Stores

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**28.2%**		**117,858**
Uncoated Corrugated Cardboard	2.5%	0.6%	10,447
Paper Bags	0.4%	0.1%	1,512
Newspaper	2.3%	0.5%	9,744
White Ledger Paper	1.0%	0.4%	4,028
Other Office Paper	1.6%	0.6%	6,840
Magazines and Catalogs	0.2%	0.2%	911
Phone Books and Directories	0.0%	0.0%	73
Other Miscellaneous Paper - Compostable	0.7%	0.5%	2,961
Other Miscellaneous Paper - Other	3.2%	0.6%	13,492
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.3%	0.1%	1,304
Remainder/Composite Paper - Compostable	9.0%	1.3%	37,501
Remainder/Composite Paper - Other	7.0%	2.4%	29,044
Glass	**2.3%**		**9,451**
Clear Glass Bottles and Containers - CRV	0.3%	0.1%	1,396
Clear Glass Bottles and Containers - Non-CRV	0.3%	0.1%	1,413
Green Glass Bottles and Containers - CRV	0.1%	0.1%	422
Green Glass Bottles and Containers - Non-CRV	0.2%	0.2%	924
Brown Glass Bottles and Containers - CRV	0.2%	0.1%	669
Brown Glass Bottles and Containers - Non-CRV	0.5%	0.8%	2,107
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.6%	0.6%	2,520
Metal	**2.0%**		**8,394**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.1%	402
Tin/Steel Cans - Other	0.3%	0.2%	1,419
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.6%	0.6%	2,634
Aluminum Cans - CRV	0.2%	0.1%	1,037
Aluminum Cans - Non-CRV	0.0%	0.0%	37
Other Non-Ferrous	0.2%	0.1%	1,011
Remainder/Composite Metal	0.4%	0.5%	1,854
Electronics	**0.1%**		**320**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.1%	0.1%	320
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**16.0%**		**66,645**
PETE Containers - CRV	0.4%	0.1%	1,786
PETE Containers - Non-CRV	0.3%	0.1%	1,116
HDPE Containers - CRV	0.0%	0.0%	173
HDPE Containers - Non-CRV	0.5%	0.2%	1,954
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	7
Miscellaneous Plastic Containers - Non-CRV	0.5%	0.2%	1,970
Plastic Trash Bags	3.0%	0.5%	12,394
Plastic Grocery and Other Merchandise Bags	0.4%	0.3%	1,482
Non-Bag Commercial and Industrial Packaging Film	0.6%	0.3%	2,494
Film Products	0.4%	0.7%	1,862
Other Film - Flexible Plastic Pouches	0.1%	0.0%	265
Other Film - Other	4.7%	1.0%	19,795
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.1%	207
Durable Plastic Items - Other	0.5%	0.2%	1,933
Remainder/Composite Plastic	4.6%	0.9%	19,207

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**46.7%**		**195,092**
Food	41.5%	4.6%	173,504
Leaves and Grass	1.0%	0.8%	4,287
Prunings and Trimmings	0.1%	0.1%	356
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	1.2%	0.4%	5,197
Carpet	0.5%	0.9%	2,272
Remainder/Composite Organic	2.3%	0.7%	9,478
Inerts and Other	**4.4%**		**18,367**
Concrete	0.8%	1.1%	3,390
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	7
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	2.4%	1.6%	9,974
Other Wood Waste	0.2%	0.2%	627
Gypsum Board	0.0%	0.0%	8
Rock, Soil and Fines	0.1%	0.2%	388
Remainder/Composite Inerts and Other	1.0%	1.1%	3,973
Household Hazardous Waste	**0.1%**		**331**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.1%	0.1%	235
Batteries	0.0%	0.0%	12
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	84
Special Waste	**0.1%**		**285**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.1%	0.1%	285
Mixed Residue	**0.3%**	**0.4%**	**1,047**
Totals	**100%**		**417,791**
Sampled Streams	**53**		

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

Table 144. Detailed Composition – Curbside Recycle: Retail Trade – Food & Beverage Stores

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**52.6%**		**26,886**
Uncoated Corrugated Cardboard	38.0%	9.5%	19,431
Paper Bags	0.9%	0.6%	451
Newspaper	0.0%	0.0%	9
White Ledger Paper	0.6%	0.4%	303
Other Office Paper	2.3%	2.0%	1,193
Magazines and Catalogs	2.5%	3.1%	1,285
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	4.2%	2.3%	2,162
Other Miscellaneous Paper - Other	1.9%	1.1%	967
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.5%	0.4%	248
Remainder/Composite Paper - Compostable	0.7%	0.4%	360
Remainder/Composite Paper - Other	0.9%	0.9%	477
Glass	**11.6%**		**5,942**
Clear Glass Bottles and Containers - CRV	4.7%	3.1%	2,407
Clear Glass Bottles and Containers - Non-CRV	4.6%	2.7%	2,339
Green Glass Bottles and Containers - CRV	0.3%	0.4%	169
Green Glass Bottles and Containers - Non-CRV	0.3%	0.6%	177
Brown Glass Bottles and Containers - CRV	1.0%	1.0%	520
Brown Glass Bottles and Containers - Non-CRV	0.6%	1.1%	330
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**4.9%**		**2,520**
Tin/Steel Cans - CRV Bimetal Containers	0.7%	0.9%	369
Tin/Steel Cans - Other	3.3%	1.9%	1,689
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.4%	0.4%	208
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.5%	0.7%	255
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.4%**		**219**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.4%	0.6%	219
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**23.6%**		**12,037**
PETE Containers - CRV	1.7%	0.8%	848
PETE Containers - Non-CRV	5.3%	6.7%	2,733
HDPE Containers - CRV	0.1%	0.1%	46
HDPE Containers - Non-CRV	2.6%	1.3%	1,344
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	4.4%	3.1%	2,243
Plastic Trash Bags	1.4%	1.1%	697
Plastic Grocery and Other Merchandise Bags	0.4%	0.5%	195
Non-Bag Commercial and Industrial Packaging Film	0.5%	0.7%	241
Film Products	0.2%	0.3%	123
Other Film - Flexible Plastic Pouches	0.0%	0.0%	6
Other Film - Other	1.2%	0.7%	634
Durable Plastic Items - #2 and #5 Bulky Rigids	3.7%	5.3%	1,870
Durable Plastic Items - Other	0.2%	0.3%	103
Remainder/Composite Plastic	1.9%	1.8%	954

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**6.7%**		**3,435**
Food	6.3%	4.4%	3,235
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.2%	0.2%	78
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.2%	0.4%	122
Inerts and Other	**0.1%**		**61**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.1%	0.2%	61
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**51,099**
Sampled Streams	**12**		

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

Table 145. Detailed Composition – Curbside Organics: Retail Trade – Food & Beverage Stores

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**10.2%**		**4,504**
Uncoated Corrugated Cardboard	1.9%	3.4%	830
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.8%	1.4%	348
Other Miscellaneous Paper - Other	0.0%	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	7.5%	12.9%	3,326
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.1%**		**56**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.1%	0.2%	56
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.3%**		**125**
PETE Containers - CRV	0.0%	0.0%	5
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.1%	14
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.1%	0.2%	39
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.2%	0.2%	68
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**89.4%**		**39,469**
Food	61.1%	14.4%	26,959
Leaves and Grass	28.3%	22.0%	12,510
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**44,153**
Sampled Streams	**5**		

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

Table 146. Detailed Composition – Other Diversion: Retail Trade – Food & Beverage Stores

Material	Estimated Percent	Estimated Tons
Paper	**66.2%**	**1,173,870**
Uncoated Corrugated Cardboard	65.3%	1,158,555
Paper Bags	0.0%	0
Newspaper	0.0%	0
White Ledger Paper	0.0%	862
Other Office Paper	0.0%	130
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.1%	959
Other Miscellaneous Paper - Other	0.0%	697
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	144
Remainder/Composite Paper - Compostable	0.7%	12,119
Remainder/Composite Paper - Other	0.0%	404
Glass	**0.4%**	**7,708**
Clear Glass Bottles and Containers - CRV	0.2%	3,437
Clear Glass Bottles and Containers - Non-CRV	0.0%	307
Green Glass Bottles and Containers - CRV	0.1%	2,461
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.1%	1,503
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**0.1%**	**1,319**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	20
Tin/Steel Cans - Other	0.0%	0
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	0.0%	655
Aluminum Cans - CRV	0.0%	640
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	0.0%	4
Remainder/Composite Metal	0.0%	0
Electronics	**0.0%**	**301**
Brown Goods	0.0%	0
Computer-related Electronics	0.0%	267
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.0%	34
Plastic	**1.1%**	**19,753**
PETE Containers - CRV	0.0%	609
PETE Containers - Non-CRV	0.1%	2,605
HDPE Containers - CRV	0.0%	0
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	823
Plastic Trash Bags	0.0%	870
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.4%	6,545
Film Products	0.2%	4,144
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	736
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	182
Durable Plastic Items - Other	0.1%	1,304
Remainder/Composite Plastic	0.1%	1,935
Other Organic	**27.7%**	**491,810**
Food	27.7%	491,808
Leaves and Grass	0.0%	0
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	2
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**4.4%**	**78,072**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	4.4%	77,683
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	389
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**316**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	316
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**1,773,150**
Sampled Streams	**79**	

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

Table 147. Detailed Composition – Disposed: Retail Trade – All Other

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**26.2%**		**637,019**
Uncoated Corrugated Cardboard	3.6%	0.9%	86,682
Paper Bags	0.5%	0.1%	11,311
Newspaper	1.9%	0.5%	45,206
White Ledger Paper	1.9%	0.6%	45,331
Other Office Paper	2.2%	0.6%	52,929
Magazines and Catalogs	0.7%	0.3%	17,659
Phone Books and Directories	0.0%	0.1%	953
Other Miscellaneous Paper - Compostable	0.4%	0.3%	9,578
Other Miscellaneous Paper - Other	3.4%	0.7%	83,610
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.2%	0.1%	3,856
Remainder/Composite Paper - Compostable	8.6%	1.4%	209,655
Remainder/Composite Paper - Other	2.9%	0.7%	70,250
Glass	**2.1%**		**51,520**
Clear Glass Bottles and Containers - CRV	0.6%	0.2%	13,970
Clear Glass Bottles and Containers - Non-CRV	0.8%	1.0%	19,159
Green Glass Bottles and Containers - CRV	0.2%	0.1%	5,155
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	953
Brown Glass Bottles and Containers - CRV	0.2%	0.1%	3,731
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	310
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.3%	0.4%	8,242
Metal	**5.7%**		**139,103**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	584
Tin/Steel Cans - Other	0.2%	0.1%	5,607
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	748
Other Ferrous	1.4%	1.0%	34,307
Aluminum Cans - CRV	0.2%	0.1%	5,365
Aluminum Cans - Non-CRV	0.0%	0.0%	242
Other Non-Ferrous	0.9%	0.6%	21,774
Remainder/Composite Metal	2.9%	1.9%	70,476
Electronics	**0.2%**		**5,843**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.1%	0.2%	2,393
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.1%	0.2%	3,450
Plastic	**13.6%**		**331,572**
PETE Containers - CRV	0.6%	0.2%	14,614
PETE Containers - Non-CRV	0.3%	0.2%	7,201
HDPE Containers - CRV	0.1%	0.1%	1,726
HDPE Containers - Non-CRV	0.5%	0.2%	11,422
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	288
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.1%	4,921
Plastic Trash Bags	2.1%	0.5%	50,209
Plastic Grocery and Other Merchandise Bags	0.3%	0.1%	6,896
Non-Bag Commercial and Industrial Packaging Film	0.6%	0.3%	15,208
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	754
Other Film - Other	2.5%	1.1%	60,571
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.2%	4,499
Durable Plastic Items - Other	2.0%	1.1%	49,853
Remainder/Composite Plastic	4.2%	1.5%	103,411
Other Organic	**33.8%**		**822,508**
Food	18.0%	4.8%	437,469
Leaves and Grass	2.4%	2.4%	58,655
Prunings and Trimmings	0.4%	0.5%	9,855
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	4.4%	3.4%	107,155
Carpet	1.7%	1.8%	40,931
Remainder/Composite Organic	6.9%	2.6%	168,443
Inerts and Other	**16.2%**		**394,471**
Concrete	0.0%	0.0%	25
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.2%	0.3%	4,760
Clean Dimensional Lumber	0.4%	0.3%	10,646
Clean Engineered Wood	0.0%	0.0%	332
Clean Pallets & Crates	5.6%	3.0%	135,886
Other Wood Waste	3.3%	2.9%	80,619
Gypsum Board	1.4%	1.7%	34,448
Rock, Soil and Fines	0.6%	0.6%	14,668
Remainder/Composite Inerts and Other	4.6%	3.6%	113,086
Household Hazardous Waste	**0.2%**		**5,239**
Paint	0.0%	0.0%	464
Vehicle and Equipment Fluids	0.1%	0.2%	3,266
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	312
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	40
Remainder/Composite Household Hazardous	0.0%	0.1%	1,157
Special Waste	**1.6%**		**39,654**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	1.6%	2.1%	39,255
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	399
Mixed Residue	**0.3%**	**0.3%**	**7,062**
Totals	**100%**		**2,433,989**
Sampled Streams	**53**		

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

Table 148. Detailed Composition – Curbside Recycle: Retail Trade – All Other

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**81.5%**		**96,102**
Uncoated Corrugated Cardboard	72.1%	13.5%	84,949
Paper Bags	0.7%	0.5%	855
Newspaper	0.2%	0.1%	228
White Ledger Paper	0.9%	0.6%	1,092
Other Office Paper	0.9%	0.7%	1,094
Magazines and Catalogs	1.5%	0.9%	1,751
Phone Books and Directories	0.2%	0.3%	214
Other Miscellaneous Paper - Compostable	1.0%	0.7%	1,172
Other Miscellaneous Paper - Other	3.7%	2.0%	4,326
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	12
Remainder/Composite Paper - Compostable	0.2%	0.2%	216
Remainder/Composite Paper - Other	0.2%	0.2%	193
Glass	**0.2%**		**284**
Clear Glass Bottles and Containers - CRV	0.2%	0.2%	216
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.1%	0.1%	68
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**1.5%**		**1,795**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	32
Tin/Steel Cans - Other	0.0%	0.0%	12
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	1.0%	1.4%	1,130
Aluminum Cans - CRV	0.1%	0.0%	61
Aluminum Cans - Non-CRV	0.0%	0.0%	28
Other Non-Ferrous	0.1%	0.1%	146
Remainder/Composite Metal	0.3%	0.5%	386
Electronics	**0.0%**		**42**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.1%	42
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**9.7%**		**11,488**
PETE Containers - CRV	0.2%	0.2%	294
PETE Containers - Non-CRV	0.2%	0.1%	253
HDPE Containers - CRV	0.0%	0.0%	8
HDPE Containers - Non-CRV	0.7%	0.8%	883
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.1%	0.1%	122
Plastic Trash Bags	0.1%	0.1%	121
Plastic Grocery and Other Merchandise Bags	4.0%	5.4%	4,687
Non-Bag Commercial and Industrial Packaging Film	1.9%	2.1%	2,274
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	8
Other Film - Other	1.1%	0.6%	1,272
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.2%	0.4%	270
Remainder/Composite Plastic	1.1%	0.6%	1,296
Other Organic	**6.7%**		**7,898**
Food	0.8%	0.6%	908
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	1
Carpet	5.9%	9.1%	6,989
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.1%**		**131**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.1%	0.2%	131
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**13**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	13
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.1%**	**0.1%**	**108**
Totals	**100%**		**117,861**
Sampled Streams	**18**		

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

Table 149. Detailed Composition – Curbside Organics: Retail Trade – All Other

None of the selected Retail Trade – All Other sites had a Curbside Organics stream.

Table 150. Detailed Composition – Other Diversion: Retail Trade – All Other

Material	Estimated Percent	Estimated Tons
Paper	**87.8%**	**165,287**
Uncoated Corrugated Cardboard	87.8%	165,222
Paper Bags	0.0%	0
Newspaper	0.0%	0
White Ledger Paper	0.0%	0
Other Office Paper	0.0%	65
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**0.2%**	**351**
Clear Glass Bottles and Containers - CRV	0.2%	292
Clear Glass Bottles and Containers - Non-CRV	0.0%	59
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**0.3%**	**624**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.0%	0
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	0.1%	227
Aluminum Cans - CRV	0.2%	321
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	0.0%	76
Remainder/Composite Metal	0.0%	0
Electronics	**0.7%**	**1,343**
Brown Goods	0.0%	0
Computer-related Electronics	0.7%	1,343
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.0%	0
Plastic	**1.2%**	**2,257**
PETE Containers - CRV	0.6%	1,158
PETE Containers - Non-CRV	0.0%	40
HDPE Containers - CRV	0.0%	39
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0
Plastic Trash Bags	0.0%	52
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.5%	968
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	0

Material	Estimated Percent	Estimated Tons
Other Organic	**1.6%**	**2,956**
Food	1.6%	2,956
Leaves and Grass	0.0%	0
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**7.9%**	**14,951**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	7.9%	14,951
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.2%**	**383**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.2%	383
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**188,152**
Sampled Streams	**26**	

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

Table 151. Detailed Composition – Disposed: Services – Management, Administrative, Support, & Social

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**24.1%**		**364,763**
Uncoated Corrugated Cardboard	1.7%	0.5%	25,078
Paper Bags	0.4%	0.3%	5,872
Newspaper	1.4%	0.4%	20,872
White Ledger Paper	1.6%	0.5%	24,164
Other Office Paper	2.1%	0.9%	31,117
Magazines and Catalogs	0.8%	0.4%	12,419
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.3%	0.3%	4,711
Other Miscellaneous Paper - Other	3.2%	0.6%	48,264
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.4%	0.1%	6,210
Remainder/Composite Paper - Compostable	10.9%	1.6%	164,498
Remainder/Composite Paper - Other	1.4%	0.4%	21,559
Glass	**1.4%**		**21,391**
Clear Glass Bottles and Containers - CRV	0.3%	0.2%	4,056
Clear Glass Bottles and Containers - Non-CRV	0.2%	0.1%	3,523
Green Glass Bottles and Containers - CRV	0.0%	0.0%	410
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	293
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	245
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	113
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	57
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	350
Flat Glass	0.6%	0.9%	9,736
Remainder/Composite Glass	0.2%	0.1%	2,608
Metal	**3.6%**		**54,110**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.1%	634
Tin/Steel Cans - Other	0.3%	0.1%	4,702
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	42
Other Ferrous	0.5%	0.3%	7,023
Aluminum Cans - CRV	0.1%	0.0%	1,889
Aluminum Cans - Non-CRV	0.1%	0.1%	1,062
Other Non-Ferrous	1.5%	1.9%	22,479
Remainder/Composite Metal	1.1%	0.7%	16,278
Electronics	**2.0%**		**29,910**
Brown Goods	0.1%	0.1%	1,273
Computer-related Electronics	0.1%	0.1%	993
Other Small Consumer Electronics	0.0%	0.0%	104
Video Display Devices - CRT	1.8%	2.0%	26,548
Video Display Devices - Other	0.1%	0.1%	993
Plastic	**10.8%**		**163,240**
PETE Containers - CRV	0.2%	0.1%	3,566
PETE Containers - Non-CRV	0.2%	0.0%	2,366
HDPE Containers - CRV	0.0%	0.0%	685
HDPE Containers - Non-CRV	0.2%	0.1%	3,560
Miscellaneous Plastic Containers - CRV	0.1%	0.1%	854
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.1%	4,130
Plastic Trash Bags	2.2%	0.3%	33,468
Plastic Grocery and Other Merchandise Bags	0.2%	0.1%	3,121
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	604
Film Products	0.0%	0.0%	61
Other Film - Flexible Plastic Pouches	0.1%	0.0%	1,340
Other Film - Other	1.4%	0.3%	21,919
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	557
Durable Plastic Items - Other	1.1%	0.5%	15,913
Remainder/Composite Plastic	4.7%	1.3%	71,096

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**45.3%**		**685,882**
Food	24.9%	4.8%	376,502
Leaves and Grass	5.7%	2.7%	86,284
Prunings and Trimmings	2.9%	1.5%	43,907
Branches and Stumps	0.2%	0.4%	3,631
Manures	0.0%	0.0%	0
Textiles	2.3%	0.7%	35,448
Carpet	1.0%	1.7%	15,305
Remainder/Composite Organic	8.2%	3.1%	124,806
Inerts and Other	**11.9%**		**180,738**
Concrete	0.1%	0.2%	1,942
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	42
Clean Dimensional Lumber	0.6%	0.5%	8,881
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	4.0%	3.4%	60,814
Other Wood Waste	4.3%	3.9%	65,386
Gypsum Board	1.4%	1.5%	20,486
Rock, Soil and Fines	1.3%	1.6%	19,958
Remainder/Composite Inerts and Other	0.2%	0.2%	3,229
Household Hazardous Waste	**0.3%**		**4,997**
Paint	0.1%	0.1%	1,061
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	61
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.3%	0.3%	3,876
Special Waste	**0.2%**		**3,177**
Ash	0.1%	0.1%	1,286
Treated Medical Waste	0.1%	0.2%	1,712
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	180
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.4%**	**0.4%**	**6,457**
Totals	**100%**		**1,514,667**
Sampled Streams	**54**		

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

Table 152. Detailed Composition – Curbside Recycle: Services – Management, Administrative, Support, & Social

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**70.5%**		**156,104**
Uncoated Corrugated Cardboard	36.1%	8.6%	80,005
Paper Bags	1.3%	0.8%	2,877
Newspaper	1.5%	1.8%	3,293
White Ledger Paper	9.4%	8.0%	20,819
Other Office Paper	4.4%	2.7%	9,740
Magazines and Catalogs	4.2%	4.5%	9,202
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	3.1%	3.5%	6,879
Other Miscellaneous Paper - Other	4.6%	3.8%	10,106
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.3%	0.2%	601
Remainder/Composite Paper - Compostable	2.3%	1.8%	4,984
Remainder/Composite Paper - Other	3.4%	2.5%	7,599
Glass	**4.7%**		**10,324**
Clear Glass Bottles and Containers - CRV	0.2%	0.4%	533
Clear Glass Bottles and Containers - Non-CRV	1.6%	1.3%	3,627
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	1.8%	1.8%	4,000
Brown Glass Bottles and Containers - CRV	0.5%	0.6%	1,194
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.4%	0.5%	970
Metal	**2.7%**		**5,994**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	1.7%	1.5%	3,807
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.1%	0.2%	274
Aluminum Cans - CRV	0.1%	0.0%	129
Aluminum Cans - Non-CRV	0.0%	0.0%	34
Other Non-Ferrous	0.8%	1.3%	1,725
Remainder/Composite Metal	0.0%	0.0%	25
Electronics	**0.1%**		**286**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.1%	0.2%	286
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**10.0%**		**22,056**
PETE Containers - CRV	0.4%	0.3%	958
PETE Containers - Non-CRV	0.8%	0.6%	1,864
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.3%	0.2%	610
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.5%	0.4%	1,118
Plastic Trash Bags	0.5%	0.3%	1,153
Plastic Grocery and Other Merchandise Bags	0.7%	0.9%	1,476
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	4
Film Products	0.0%	0.0%	8
Other Film - Flexible Plastic Pouches	0.0%	0.0%	86
Other Film - Other	0.5%	0.3%	1,184
Durable Plastic Items - #2 and #5 Bulky Rigids	2.9%	3.1%	6,342
Durable Plastic Items - Other	1.8%	2.0%	3,974
Remainder/Composite Plastic	1.5%	1.0%	3,278

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**11.5%**		**25,423**
Food	1.8%	1.4%	3,882
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	8.0%	9.9%	17,723
Manures	0.0%	0.0%	0
Textiles	1.2%	0.9%	2,731
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.5%	0.7%	1,087
Inerts and Other	**0.3%**		**587**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	50
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.2%	0.3%	537
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**77**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	66
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	11
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.1%**		**287**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.1%	0.2%	287
Mixed Residue	**0.1%**	**0.2%**	**280**
Totals	**100%**		**221,419**
Sampled Streams	**26**		

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

Table 153. Detailed Composition – Curbside Organics: Services – Management, Administrative, Support, & Social

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**0.0%**		**0**
Uncoated Corrugated Cardboard	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0.0%	0
Other Miscellaneous Paper - Other	0.0%	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**0**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.0%**		**0**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**100.0%**		**1,161,461**
Food	0.0%	0.0%	184
Leaves and Grass	98.8%	3.7%	1,147,946
Prunings and Trimmings	1.1%	3.7%	13,331
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**1,161,461**
Sampled Streams	**6**		

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

Table 154. Detailed Composition – Other Diversion: Services – Management, Administrative, Support, & Social

Material	Estimated Percent	Estimated Tons
Paper	**10.7%**	**3,690**
Uncoated Corrugated Cardboard	1.6%	551
Paper Bags	0.1%	26
Newspaper	0.0%	0
White Ledger Paper	1.1%	390
Other Office Paper	6.9%	2,382
Magazines and Catalogs	0.2%	63
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.5%	175
Other Miscellaneous Paper - Other	0.1%	26
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.2%	70
Remainder/Composite Paper - Other	0.0%	7
Glass	**2.5%**	**870**
Clear Glass Bottles and Containers - CRV	1.8%	614
Clear Glass Bottles and Containers - Non-CRV	0.7%	256
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**1.8%**	**626**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.1%	40
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	0.7%	225
Aluminum Cans - CRV	1.0%	343
Aluminum Cans - Non-CRV	0.0%	13
Other Non-Ferrous	0.0%	4
Remainder/Composite Metal	0.0%	0
Electronics	**4.7%**	**1,622**
Brown Goods	0.1%	51
Computer-related Electronics	2.8%	966
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	1.7%	572
Video Display Devices - Other	0.1%	33
Plastic	**6.3%**	**2,187**
PETE Containers - CRV	0.5%	158
PETE Containers - Non-CRV	0.1%	51
HDPE Containers - CRV	1.3%	457
HDPE Containers - Non-CRV	0.1%	45
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.1%	31
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	4.1%	1,430
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	16
Other Organic	**5.3%**	**1,823**
Food	5.3%	1,823
Leaves and Grass	0.0%	0
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**67.7%**	**23,419**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	0.0%	0
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	67.7%	23,419
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.1%**	**34**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.1%	34
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.9%**	**312**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.9%	312
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**34,583**
Sampled Streams	**21**	

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

Table 155. Detailed Composition – Disposed: Services – Professional, Technical, & Financial

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**29.1%**		**1,162,870**
Uncoated Corrugated Cardboard	4.1%	1.1%	161,826
Paper Bags	0.5%	0.2%	18,127
Newspaper	2.5%	0.7%	98,110
White Ledger Paper	2.1%	0.7%	82,352
Other Office Paper	2.4%	0.9%	95,669
Magazines and Catalogs	1.0%	0.5%	37,985
Phone Books and Directories	0.0%	0.0%	1,100
Other Miscellaneous Paper - Compostable	0.6%	0.8%	23,243
Other Miscellaneous Paper - Other	3.0%	0.7%	121,279
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.1%	0.0%	2,604
Remainder/Composite Paper - Compostable	9.9%	3.1%	395,521
Remainder/Composite Paper - Other	3.1%	3.2%	125,054
Glass	**1.4%**		**55,539**
Clear Glass Bottles and Containers - CRV	0.2%	0.1%	7,183
Clear Glass Bottles and Containers - Non-CRV	0.3%	0.1%	13,157
Green Glass Bottles and Containers - CRV	0.2%	0.1%	6,789
Green Glass Bottles and Containers - Non-CRV	0.3%	0.3%	10,793
Brown Glass Bottles and Containers - CRV	0.1%	0.1%	2,897
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	331
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	29
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	174
Flat Glass	0.0%	0.0%	943
Remainder/Composite Glass	0.3%	0.3%	13,244
Metal	**4.1%**		**162,103**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	847
Tin/Steel Cans - Other	0.2%	0.1%	7,996
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	1.2%	0.6%	46,400
Aluminum Cans - CRV	0.1%	0.0%	3,749
Aluminum Cans - Non-CRV	0.0%	0.0%	112
Other Non-Ferrous	0.9%	0.6%	37,317
Remainder/Composite Metal	1.6%	1.2%	65,683
Electronics	**2.0%**		**78,459**
Brown Goods	0.6%	0.7%	23,189
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	60
Video Display Devices - CRT	1.4%	1.6%	55,181
Video Display Devices - Other	0.0%	0.0%	29
Plastic	**13.2%**		**528,834**
PETE Containers - CRV	0.2%	0.1%	9,864
PETE Containers - Non-CRV	0.1%	0.0%	4,872
HDPE Containers - CRV	0.1%	0.0%	2,330
HDPE Containers - Non-CRV	0.3%	0.2%	12,911
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	956
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.1%	7,565
Plastic Trash Bags	1.9%	0.4%	75,623
Plastic Grocery and Other Merchandise Bags	0.2%	0.0%	7,788
Non-Bag Commercial and Industrial Packaging Film	0.8%	0.7%	33,130
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	1,020
Other Film - Other	2.1%	1.5%	85,817
Durable Plastic Items - #2 and #5 Bulky Rigids	0.4%	0.3%	15,730
Durable Plastic Items - Other	1.1%	0.6%	45,243
Remainder/Composite Plastic	5.7%	2.6%	225,985

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**23.1%**		**922,506**
Food	8.3%	1.9%	330,452
Leaves and Grass	3.4%	1.7%	136,387
Prunings and Trimmings	3.2%	2.9%	127,780
Branches and Stumps	0.2%	0.4%	9,686
Manures	0.0%	0.1%	1,478
Textiles	2.1%	0.7%	84,487
Carpet	0.6%	0.6%	23,797
Remainder/Composite Organic	5.2%	2.0%	208,438
Inerts and Other	**25.1%**		**1,000,711**
Concrete	2.0%	1.5%	79,783
Asphalt Paving	1.0%	1.2%	40,743
Asphalt Roofing	1.1%	1.8%	43,328
Clean Dimensional Lumber	1.0%	0.7%	40,020
Clean Engineered Wood	1.9%	2.3%	74,531
Clean Pallets & Crates	8.3%	3.8%	332,687
Other Wood Waste	3.1%	1.7%	124,307
Gypsum Board	0.6%	0.7%	25,730
Rock, Soil and Fines	2.2%	1.7%	89,652
Remainder/Composite Inerts and Other	3.8%	2.6%	149,929
Household Hazardous Waste	**0.2%**		**7,437**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	174
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	866
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	116
Remainder/Composite Household Hazardous	0.2%	0.2%	6,281
Special Waste	**1.8%**		**71,286**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	174
Bulky Items	1.8%	1.3%	70,937
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	174
Mixed Residue	**0.1%**	**0.2%**	**4,898**
Totals	**100%**		**3,994,643**
Sampled Streams	**53**		

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

Table 156. Detailed Composition – Curbside Recycle: Services – Professional, Technical, & Financial

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**86.1%**		**588,519**
Uncoated Corrugated Cardboard	51.0%	8.9%	348,608
Paper Bags	0.5%	0.4%	3,124
Newspaper	3.2%	4.2%	22,136
White Ledger Paper	7.9%	4.9%	54,347
Other Office Paper	3.7%	3.7%	25,540
Magazines and Catalogs	4.9%	5.0%	33,581
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	4.0%	4.7%	27,383
Other Miscellaneous Paper - Other	10.2%	6.6%	69,785
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	103
Remainder/Composite Paper - Compostable	0.2%	0.2%	1,269
Remainder/Composite Paper - Other	0.4%	0.4%	2,644
Glass	**3.5%**		**23,814**
Clear Glass Bottles and Containers - CRV	1.1%	1.1%	7,399
Clear Glass Bottles and Containers - Non-CRV	1.4%	1.5%	9,490
Green Glass Bottles and Containers - CRV	0.1%	0.1%	570
Green Glass Bottles and Containers - Non-CRV	0.4%	0.5%	2,663
Brown Glass Bottles and Containers - CRV	0.2%	0.3%	1,350
Brown Glass Bottles and Containers - Non-CRV	0.3%	0.6%	2,342
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.7%**		**4,567**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.2%	0.1%	1,061
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.1%	0.1%	765
Aluminum Cans - CRV	0.2%	0.2%	1,394
Aluminum Cans - Non-CRV	0.1%	0.1%	517
Other Non-Ferrous	0.1%	0.1%	511
Remainder/Composite Metal	0.0%	0.1%	320
Electronics	**0.1%**		**379**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	254
Other Small Consumer Electronics	0.0%	0.0%	125
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**8.0%**		**54,425**
PETE Containers - CRV	0.8%	0.7%	5,354
PETE Containers - Non-CRV	0.2%	0.2%	1,429
HDPE Containers - CRV	0.0%	0.0%	22
HDPE Containers - Non-CRV	0.3%	0.3%	2,021
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	2.7%	4.1%	18,616
Plastic Trash Bags	0.1%	0.1%	639
Plastic Grocery and Other Merchandise Bags	0.0%	0.1%	313
Non-Bag Commercial and Industrial Packaging Film	1.6%	2.4%	10,680
Film Products	0.0%	0.0%	150
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.2%	0.1%	1,358
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	149
Durable Plastic Items - Other	0.0%	0.0%	110
Remainder/Composite Plastic	2.0%	1.3%	13,584

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**0.1%**		**996**
Food	0.1%	0.1%	483
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.1%	0.1%	514
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**1.6%**		**10,908**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	1.6%	2.4%	10,908
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**16**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	16
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**683,626**
Sampled Streams	**36**		

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

Table 157. Detailed Composition – Curbside Organics: Services – Professional, Technical, & Financial

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**0.7%**		**1,301**
Uncoated Corrugated Cardboard	0.0%	0.1%	57
Paper Bags	0.0%	0.0%	30
Newspaper	0.1%	0.1%	107
White Ledger Paper	0.0%	0.1%	42
Other Office Paper	0.2%	0.5%	413
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	0.4%	0.8%	635
Other Miscellaneous Paper - Other	0.0%	0.0%	11
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0.0%	6
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**32**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	32
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**23**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	23
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**13**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	13
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.2%**		**397**
PETE Containers - CRV	0.1%	0.1%	102
PETE Containers - Non-CRV	0.0%	0.1%	45
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	2
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.1%	84
Plastic Trash Bags	0.0%	0.1%	50
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	3
Other Film - Other	0.0%	0.1%	50
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.1%	57
Remainder/Composite Plastic	0.0%	0.0%	2
Other Organic	**99.0%**		**173,063**
Food	0.1%	0.3%	203
Leaves and Grass	98.8%	2.6%	172,743
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.1%	0.1%	117
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**14**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	14
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**174,842**
Sampled Streams	**3**		

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

Table 158. Detailed Composition – Other Diversion: Services – Professional, Technical, & Financial

Material	Estimated Percent	Estimated Tons
Paper	**40.9%**	**37,407**
Uncoated Corrugated Cardboard	17.7%	16,167
Paper Bags	0.1%	90
Newspaper	0.4%	382
White Ledger Paper	4.4%	3,983
Other Office Paper	8.0%	7,353
Magazines and Catalogs	0.7%	625
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	1
Other Miscellaneous Paper - Other	9.6%	8,734
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.1%	72
Glass	**1.1%**	**1,022**
Clear Glass Bottles and Containers - CRV	0.2%	211
Clear Glass Bottles and Containers - Non-CRV	0.2%	193
Green Glass Bottles and Containers - CRV	0.2%	225
Green Glass Bottles and Containers - Non-CRV	0.0%	13
Brown Glass Bottles and Containers - CRV	0.4%	373
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	7
Metal	**28.0%**	**25,586**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	5
Tin/Steel Cans - Other	0.0%	13
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	20.0%	18,258
Aluminum Cans - CRV	0.5%	459
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	1.8%	1,657
Remainder/Composite Metal	5.7%	5,193
Electronics	**1.4%**	**1,245**
Brown Goods	0.0%	0
Computer-related Electronics	1.3%	1,199
Other Small Consumer Electronics	0.0%	6
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.0%	40
Plastic	**1.8%**	**1,649**
PETE Containers - CRV	1.2%	1,104
PETE Containers - Non-CRV	0.1%	121
HDPE Containers - CRV	0.4%	354
HDPE Containers - Non-CRV	0.1%	58
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	11
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	0
Other Organic	**8.2%**	**7,527**
Food	5.1%	4,674
Leaves and Grass	3.1%	2,853
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**16.4%**	**14,990**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.4%	329
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	14.3%	13,110
Other Wood Waste	0.0%	0
Gypsum Board	0.7%	642
Rock, Soil and Fines	1.0%	908
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**1.8%**	**1,605**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	1.7%	1,570
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	35
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.4%**	**371**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.4%	371
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**91,402**
Sampled Streams	**63**	

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

Table 159. Detailed Composition – Disposed: Services – Repair & Personal

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**30.2%**		**84,886**
Uncoated Corrugated Cardboard	5.3%	1.9%	15,017
Paper Bags	0.3%	0.1%	889
Newspaper	2.6%	1.5%	7,218
White Ledger Paper	1.3%	0.5%	3,776
Other Office Paper	1.5%	0.7%	4,294
Magazines and Catalogs	0.6%	0.3%	1,601
Phone Books and Directories	0.0%	0.0%	31
Other Miscellaneous Paper - Compostable	0.2%	0.1%	460
Other Miscellaneous Paper - Other	3.9%	1.4%	11,048
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.2%	0.2%	665
Remainder/Composite Paper - Compostable	8.7%	2.1%	24,506
Remainder/Composite Paper - Other	5.5%	1.7%	15,381
Glass	**2.7%**		**7,588**
Clear Glass Bottles and Containers - CRV	0.4%	0.1%	986
Clear Glass Bottles and Containers - Non-CRV	0.3%	0.2%	770
Green Glass Bottles and Containers - CRV	0.1%	0.1%	297
Green Glass Bottles and Containers - Non-CRV	0.5%	0.7%	1,266
Brown Glass Bottles and Containers - CRV	0.1%	0.1%	231
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	31
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.7%	0.9%	2,099
Remainder/Composite Glass	0.7%	0.7%	1,910
Metal	**8.5%**		**24,054**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.1%	322
Tin/Steel Cans - Other	0.5%	0.3%	1,466
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.2%	0.2%	495
Other Ferrous	3.3%	2.3%	9,160
Aluminum Cans - CRV	0.1%	0.1%	381
Aluminum Cans - Non-CRV	0.0%	0.0%	33
Other Non-Ferrous	2.5%	1.7%	6,897
Remainder/Composite Metal	1.9%	0.8%	5,301
Electronics	**0.7%**		**1,916**
Brown Goods	0.0%	0.1%	139
Computer-related Electronics	0.0%	0.1%	117
Other Small Consumer Electronics	0.0%	0.0%	64
Video Display Devices - CRT	0.4%	0.7%	1,191
Video Display Devices - Other	0.1%	0.2%	405
Plastic	**15.3%**		**43,111**
PETE Containers - CRV	0.4%	0.2%	1,180
PETE Containers - Non-CRV	0.3%	0.3%	709
HDPE Containers - CRV	0.2%	0.2%	454
HDPE Containers - Non-CRV	1.8%	1.3%	4,972
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	46
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.1%	635
Plastic Trash Bags	1.1%	0.3%	3,031
Plastic Grocery and Other Merchandise Bags	0.3%	0.1%	758
Non-Bag Commercial and Industrial Packaging Film	1.2%	0.7%	3,343
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	120
Other Film - Other	1.9%	1.0%	5,453
Durable Plastic Items - #2 and #5 Bulky Rigids	0.7%	0.7%	1,921
Durable Plastic Items - Other	2.7%	1.6%	7,617
Remainder/Composite Plastic	4.6%	1.5%	12,870
Other Organic	**21.5%**		**60,389**
Food	7.4%	2.6%	20,927
Leaves and Grass	3.4%	2.2%	9,554
Prunings and Trimmings	0.6%	0.6%	1,705
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	4.0%	1.8%	11,271
Carpet	0.8%	0.8%	2,272
Remainder/Composite Organic	5.2%	1.9%	14,659
Inerts and Other	**16.0%**		**45,147**
Concrete	0.2%	0.3%	511
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	2.3%	3.8%	6,552
Clean Dimensional Lumber	0.5%	0.4%	1,481
Clean Engineered Wood	0.7%	0.7%	2,028
Clean Pallets & Crates	1.4%	1.4%	3,947
Other Wood Waste	4.9%	4.9%	13,928
Gypsum Board	1.5%	1.8%	4,319
Rock, Soil and Fines	2.0%	1.6%	5,719
Remainder/Composite Inerts and Other	2.4%	1.6%	6,663
Household Hazardous Waste	**2.5%**		**7,008**
Paint	1.4%	1.5%	3,899
Vehicle and Equipment Fluids	1.1%	1.8%	3,064
Used Oil	0.0%	0.0%	18
Batteries	0.0%	0.0%	13
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	14
Special Waste	**2.2%**		**6,061**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	1.2%	1.8%	3,455
Tires	0.9%	1.1%	2,605
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.4%**	**0.5%**	**1,212**
Totals	**100%**		**281,371**
Sampled Streams	**52**		

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

Table 160. Detailed Composition – Curbside Recycle: Services – Repair & Personal

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**77.2%**		**33,684**
Uncoated Corrugated Cardboard	65.1%	12.8%	28,403
Paper Bags	0.8%	0.9%	330
Newspaper	1.4%	1.1%	621
White Ledger Paper	2.2%	2.3%	961
Other Office Paper	0.2%	0.2%	74
Magazines and Catalogs	0.6%	0.9%	278
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	2.3%	2.7%	1,009
Other Miscellaneous Paper - Other	2.2%	1.8%	955
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.6%	0.7%	278
Remainder/Composite Paper - Other	1.8%	1.5%	776
Glass	**5.7%**		**2,471**
Clear Glass Bottles and Containers - CRV	0.5%	0.7%	227
Clear Glass Bottles and Containers - Non-CRV	0.7%	1.0%	307
Green Glass Bottles and Containers - CRV	1.4%	1.9%	599
Green Glass Bottles and Containers - Non-CRV	2.0%	2.8%	870
Brown Glass Bottles and Containers - CRV	0.3%	0.4%	149
Brown Glass Bottles and Containers - Non-CRV	0.7%	1.0%	318
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**3.9%**		**1,708**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	3.8%	5.5%	1,645
Aluminum Cans - CRV	0.1%	0.2%	49
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.1%	14
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**10.6%**		**4,605**
PETE Containers - CRV	0.0%	0.0%	15
PETE Containers - Non-CRV	0.1%	0.1%	23
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	2.9%	4.8%	1,279
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.3%	0.3%	115
Plastic Trash Bags	0.1%	0.1%	45
Plastic Grocery and Other Merchandise Bags	0.4%	0.4%	155
Non-Bag Commercial and Industrial Packaging Film	0.3%	0.4%	144
Film Products	0.1%	0.1%	41
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.1%	20
Durable Plastic Items - #2 and #5 Bulky Rigids	4.8%	8.6%	2,078
Durable Plastic Items - Other	0.8%	1.5%	335
Remainder/Composite Plastic	0.8%	0.7%	353

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**0.9%**		**414**
Food	0.2%	0.3%	91
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.2%	0.2%	83
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.6%	0.8%	240
Inerts and Other	**1.3%**		**563**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.4%	0.7%	173
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.9%	1.3%	390
Household Hazardous Waste	**0.4%**		**188**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.4%	0.6%	188
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**43,633**
Sampled Streams	**13**		

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

Table 161. Detailed Composition – Curbside Organics: Services – Repair & Personal

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**5.0%**		**3,626**
Uncoated Corrugated Cardboard	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	5.0%	0.0%	3,626
Other Miscellaneous Paper - Other	0.0%	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**0**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.0%**		**0**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**95.0%**		**68,901**
Food	95.0%	0.0%	68,901
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**72,528**
Sampled Streams	**1**		

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

Table 162. Detailed Composition – Other Diversion: Services – Repair & Personal

Material	Estimated Percent	Estimated Tons
Paper	**6.1%**	**3,334**
Uncoated Corrugated Cardboard	6.1%	3,319
Paper Bags	0.0%	0
Newspaper	0.0%	0
White Ledger Paper	0.0%	0
Other Office Paper	0.0%	1
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	0.0%	0
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	13
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**0.1%**	**68**
Clear Glass Bottles and Containers - CRV	0.1%	67
Clear Glass Bottles and Containers - Non-CRV	0.0%	1
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**78.6%**	**43,009**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.0%	0
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	43.6%	23,840
Aluminum Cans - CRV	0.1%	51
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	31.1%	17,017
Remainder/Composite Metal	3.8%	2,102
Electronics	**0.2%**	**97**
Brown Goods	0.0%	0
Computer-related Electronics	0.1%	57
Other Small Consumer Electronics	0.0%	0
Video Display Devices - CRT	0.0%	0
Video Display Devices - Other	0.1%	40
Plastic	**1.8%**	**1,005**
PETE Containers - CRV	0.8%	419
PETE Containers - Non-CRV	0.0%	4
HDPE Containers - CRV	0.0%	0
HDPE Containers - Non-CRV	0.0%	12
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	1.0%	569
Other Organic	**1.4%**	**792**
Food	0.0%	0
Leaves and Grass	0.0%	0
Prunings and Trimmings	0.0%	0
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	1.4%	790
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	2
Inerts and Other	**11.7%**	**6,400**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	0.0%	0
Clean Pallets & Crates	11.7%	6,382
Other Wood Waste	0.0%	19
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**54,706**
Sampled Streams	**36**	

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

Table 163. Detailed Composition – Disposed: Not Elsewhere Classified

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**27.6%**		**148,662**
Uncoated Corrugated Cardboard	4.5%	1.9%	24,092
Paper Bags	0.3%	0.1%	1,659
Newspaper	1.2%	0.4%	6,355
White Ledger Paper	1.9%	0.7%	10,098
Other Office Paper	1.8%	1.1%	9,942
Magazines and Catalogs	1.9%	1.0%	10,499
Phone Books and Directories	0.1%	0.1%	325
Other Miscellaneous Paper - Compostable	0.2%	0.2%	1,164
Other Miscellaneous Paper - Other	3.3%	1.5%	17,840
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.2%	0.2%	1,249
Remainder/Composite Paper - Compostable	9.0%	1.5%	48,398
Remainder/Composite Paper - Other	3.2%	1.0%	17,043
Glass	**4.8%**		**26,005**
Clear Glass Bottles and Containers - CRV	0.3%	0.1%	1,551
Clear Glass Bottles and Containers - Non-CRV	0.2%	0.1%	1,144
Green Glass Bottles and Containers - CRV	0.1%	0.0%	280
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	172
Brown Glass Bottles and Containers - CRV	0.3%	0.4%	1,704
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	112
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	2.2%	2.7%	11,778
Remainder/Composite Glass	1.7%	1.7%	9,265
Metal	**2.9%**		**15,689**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	139
Tin/Steel Cans - Other	0.1%	0.1%	778
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	57
Other Ferrous	1.2%	0.6%	6,287
Aluminum Cans - CRV	0.1%	0.0%	696
Aluminum Cans - Non-CRV	0.1%	0.1%	271
Other Non-Ferrous	0.6%	0.4%	3,201
Remainder/Composite Metal	0.8%	0.4%	4,260
Electronics	**0.2%**		**1,241**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.2%	0.3%	1,241
Plastic	**12.4%**		**67,071**
PETE Containers - CRV	0.2%	0.1%	1,330
PETE Containers - Non-CRV	0.2%	0.1%	997
HDPE Containers - CRV	0.0%	0.0%	37
HDPE Containers - Non-CRV	0.3%	0.1%	1,688
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	174
Miscellaneous Plastic Containers - Non-CRV	0.2%	0.0%	847
Plastic Trash Bags	2.0%	0.4%	10,756
Plastic Grocery and Other Merchandise Bags	0.2%	0.1%	1,291
Non-Bag Commercial and Industrial Packaging Film	1.8%	1.6%	9,482
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	184
Other Film - Other	1.7%	0.5%	9,147
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	0.1%	630
Durable Plastic Items - Other	1.8%	1.1%	9,740
Remainder/Composite Plastic	3.9%	0.8%	20,768
Other Organic	**38.3%**		**206,450**
Food	16.0%	4.5%	86,197
Leaves and Grass	5.7%	3.5%	30,678
Prunings and Trimmings	5.0%	3.3%	26,986
Branches and Stumps	0.0%	0.0%	0
Manures	0.4%	0.6%	2,117
Textiles	2.8%	1.0%	15,017
Carpet	0.3%	0.4%	1,415
Remainder/Composite Organic	8.2%	3.7%	44,040
Inerts and Other	**11.5%**		**62,169**
Concrete	1.1%	1.0%	5,942
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	147
Clean Dimensional Lumber	0.7%	0.5%	3,569
Clean Engineered Wood	1.1%	1.2%	6,070
Clean Pallets & Crates	4.2%	2.6%	22,650
Other Wood Waste	1.5%	0.9%	7,936
Gypsum Board	0.0%	0.0%	46
Rock, Soil and Fines	2.2%	2.2%	12,012
Remainder/Composite Inerts and Other	0.7%	0.7%	3,796
Household Hazardous Waste	**0.0%**		**66**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	25
Batteries	0.0%	0.0%	37
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	4
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**1.4%**		**7,339**
Ash	0.0%	0.0%	95
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	1.3%	1.4%	7,157
Tires	0.0%	0.0%	88
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.8%**	**0.6%**	**4,166**
Totals	**100%**		**538,858**
Sampled Streams	**53**		

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

Table 164. Detailed Composition – Curbside Recycle: Not Elsewhere Classified

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**74.3%**		**39,479**
Uncoated Corrugated Cardboard	62.5%	12.3%	33,188
Paper Bags	0.4%	0.2%	212
Newspaper	0.7%	0.7%	375
White Ledger Paper	2.0%	2.3%	1,071
Other Office Paper	4.4%	4.8%	2,345
Magazines and Catalogs	1.2%	1.1%	621
Phone Books and Directories	0.1%	0.3%	79
Other Miscellaneous Paper - Compostable	0.7%	0.6%	383
Other Miscellaneous Paper - Other	1.3%	1.1%	693
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	5
Remainder/Composite Paper - Compostable	0.2%	0.2%	99
Remainder/Composite Paper - Other	0.8%	0.8%	409
Glass	**10.9%**		**5,771**
Clear Glass Bottles and Containers - CRV	2.4%	2.7%	1,291
Clear Glass Bottles and Containers - Non-CRV	0.9%	1.1%	504
Green Glass Bottles and Containers - CRV	1.3%	1.4%	706
Green Glass Bottles and Containers - Non-CRV	2.6%	3.3%	1,381
Brown Glass Bottles and Containers - CRV	3.6%	4.6%	1,889
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**1.1%**		**563**
Tin/Steel Cans - CRV Bimetal Containers	0.1%	0.1%	51
Tin/Steel Cans - Other	0.4%	0.3%	187
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.1%	0.1%	51
Aluminum Cans - CRV	0.5%	0.9%	258
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	16
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**7.1%**		**3,756**
PETE Containers - CRV	0.6%	0.7%	331
PETE Containers - Non-CRV	0.5%	0.6%	243
HDPE Containers - CRV	0.1%	0.1%	31
HDPE Containers - Non-CRV	0.5%	0.4%	289
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	7
Miscellaneous Plastic Containers - Non-CRV	0.5%	0.6%	285
Plastic Trash Bags	0.5%	0.5%	276
Plastic Grocery and Other Merchandise Bags	0.1%	0.1%	28
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	3
Film Products	1.8%	3.2%	942
Other Film - Flexible Plastic Pouches	0.0%	0.0%	6
Other Film - Other	1.5%	0.9%	816
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.2%	84
Durable Plastic Items - Other	0.0%	0.0%	1
Remainder/Composite Plastic	0.8%	0.8%	415
Other Organic	**5.9%**		**3,136**
Food	5.2%	6.0%	2,758
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.2%	0.2%	80
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.6%	0.8%	299
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.8%**		**404**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.8%	1.5%	404
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**53,109**
Sampled Streams	**24**		

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

Table 165. Detailed Composition – Curbside Organics: Not Elsewhere Classified

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**2.1%**		**196**
Uncoated Corrugated Cardboard	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	4
Newspaper	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	2
Magazines and Catalogs	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	1.9%	0.0%	180
Other Miscellaneous Paper - Other	0.1%	0.0%	11
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0
Glass	**0.0%**		**0**
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**0.0%**		**0**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.0%	0.0%	0
Aluminum Cans - CRV	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0
Electronics	**0.0%**		**0**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.0%	0.0%	0
Other Small Consumer Electronics	0.0%	0.0%	0
Video Display Devices - CRT	0.0%	0.0%	0
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**0.0%**		**0**
PETE Containers - CRV	0.0%	0.0%	0
PETE Containers - Non-CRV	0.0%	0.0%	0
HDPE Containers - CRV	0.0%	0.0%	0
HDPE Containers - Non-CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0
Plastic Trash Bags	0.0%	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0
Film Products	0.0%	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0
Other Film - Other	0.0%	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0
Durable Plastic Items - Other	0.0%	0.0%	0
Remainder/Composite Plastic	0.0%	0.0%	0

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**97.9%**		**9,234**
Food	1.2%	0.0%	109
Leaves and Grass	48.4%	0.0%	4,563
Prunings and Trimmings	48.4%	0.0%	4,563
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	0.0%	0.0%	0
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	0.0%	0.0%	0
Inerts and Other	**0.0%**		**0**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.0%	0.0%	0
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	0
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.0%	0
Household Hazardous Waste	**0.0%**		**0**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	0
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**0.0%**		**0**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.0%	0.0%	0
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**0**
Totals	**100%**		**9,430**
Sampled Streams	**2**		

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

Table 166. Detailed Composition – Other Diversion: Not Elsewhere Classified

Material	Estimated Percent	Estimated Tons
Paper	**8.2%**	**56,148**
Uncoated Corrugated Cardboard	8.1%	55,416
Paper Bags	0.0%	0
Newspaper	0.0%	0
White Ledger Paper	0.0%	0
Other Office Paper	0.0%	3
Magazines and Catalogs	0.0%	0
Phone Books and Directories	0.0%	0
Other Miscellaneous Paper - Compostable	0.0%	0
Other Miscellaneous Paper - Other	0.1%	729
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0
Remainder/Composite Paper - Compostable	0.0%	0
Remainder/Composite Paper - Other	0.0%	0
Glass	**0.0%**	**0**
Clear Glass Bottles and Containers - CRV	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0
Flat Glass	0.0%	0
Remainder/Composite Glass	0.0%	0
Metal	**9.7%**	**66,765**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0
Tin/Steel Cans - Other	0.0%	0
Major Appliances	0.0%	0
Used Oil Filters	0.0%	0
Other Ferrous	8.1%	56,028
Aluminum Cans - CRV	0.0%	296
Aluminum Cans - Non-CRV	0.0%	0
Other Non-Ferrous	1.5%	10,406
Remainder/Composite Metal	0.0%	34
Electronics	**0.2%**	**1,277**
Brown Goods	0.0%	5
Computer-related Electronics	0.0%	246
Other Small Consumer Electronics	0.0%	111
Video Display Devices - CRT	0.1%	916
Video Display Devices - Other	0.0%	0
Plastic	**0.0%**	**323**
PETE Containers - CRV	0.0%	314
PETE Containers - Non-CRV	0.0%	0
HDPE Containers - CRV	0.0%	10
HDPE Containers - Non-CRV	0.0%	0
Miscellaneous Plastic Containers - CRV	0.0%	0
Miscellaneous Plastic Containers - Non-CRV	0.0%	0
Plastic Trash Bags	0.0%	0
Plastic Grocery and Other Merchandise Bags	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.0%	0
Film Products	0.0%	0
Other Film - Flexible Plastic Pouches	0.0%	0
Other Film - Other	0.0%	0
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0
Durable Plastic Items - Other	0.0%	0
Remainder/Composite Plastic	0.0%	0
Other Organic	**75.7%**	**520,967**
Food	31.1%	214,139
Leaves and Grass	15.9%	109,124
Prunings and Trimmings	28.7%	197,704
Branches and Stumps	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Carpet	0.0%	0
Remainder/Composite Organic	0.0%	0
Inerts and Other	**6.1%**	**42,166**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	0.0%	0
Clean Dimensional Lumber	0.0%	0
Clean Engineered Wood	4.2%	28,927
Clean Pallets & Crates	0.8%	5,235
Other Wood Waste	0.0%	0
Gypsum Board	0.0%	0
Rock, Soil and Fines	0.6%	4,118
Remainder/Composite Inerts and Other	0.6%	3,886
Household Hazardous Waste	**0.0%**	**106**
Paint	0.0%	0
Vehicle and Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	106
Mercury-Containing Items - Not Lamps	0.0%	0
Lamps - Fluorescent and LED	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	**0.0%**	**0**
Totals	**100%**	**687,752**
Sampled Streams	**49**	

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

Table 167. Detailed Composition – Disposed: Multi-Family

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**23.5%**		**593,459**
Uncoated Corrugated Cardboard	3.6%	1.5%	90,061
Paper Bags	0.5%	0.1%	13,314
Newspaper	4.6%	3.3%	117,201
White Ledger Paper	0.5%	0.3%	13,345
Other Office Paper	0.6%	0.3%	14,862
Magazines and Catalogs	0.7%	0.3%	18,876
Phone Books and Directories	0.0%	0.0%	773
Other Miscellaneous Paper - Compostable	0.3%	0.2%	7,471
Other Miscellaneous Paper - Other	4.7%	1.0%	119,119
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.3%	0.1%	8,004
Remainder/Composite Paper - Compostable	6.8%	1.1%	170,875
Remainder/Composite Paper - Other	0.8%	0.5%	19,559
Glass	**3.0%**		**75,495**
Clear Glass Bottles and Containers - CRV	0.8%	0.3%	21,143
Clear Glass Bottles and Containers - Non-CRV	0.8%	0.3%	20,302
Green Glass Bottles and Containers - CRV	0.1%	0.1%	1,894
Green Glass Bottles and Containers - Non-CRV	0.1%	0.1%	1,862
Brown Glass Bottles and Containers - CRV	0.6%	0.4%	14,628
Brown Glass Bottles and Containers - Non-CRV	0.1%	0.1%	2,590
Other Colored Glass Bottles and Containers - CRV	0.1%	0.1%	1,474
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	89
Flat Glass	0.1%	0.1%	1,464
Remainder/Composite Glass	0.4%	0.2%	10,049
Metal	**3.5%**		**89,255**
Tin/Steel Cans - CRV Bimetal Containers	0.2%	0.3%	5,560
Tin/Steel Cans - Other	0.7%	0.2%	17,903
Major Appliances	0.0%	0.0%	28
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	0.8%	0.7%	19,097
Aluminum Cans - CRV	0.1%	0.0%	3,019
Aluminum Cans - Non-CRV	0.1%	0.1%	2,730
Other Non-Ferrous	0.8%	0.6%	19,404
Remainder/Composite Metal	0.9%	0.3%	21,516
Electronics	**1.6%**		**39,631**
Brown Goods	0.5%	0.5%	11,446
Computer-related Electronics	0.2%	0.2%	5,091
Other Small Consumer Electronics	0.3%	0.2%	6,605
Video Display Devices - CRT	0.5%	0.6%	12,000
Video Display Devices - Other	0.2%	0.2%	4,490
Plastic	**11.0%**		**278,032**
PETE Containers - CRV	0.4%	0.1%	9,408
PETE Containers - Non-CRV	0.6%	0.2%	13,956
HDPE Containers - CRV	0.0%	0.0%	921
HDPE Containers - Non-CRV	0.4%	0.1%	10,849
Miscellaneous Plastic Containers - CRV	0.1%	0.1%	1,341
Miscellaneous Plastic Containers - Non-CRV	0.6%	0.2%	14,772
Plastic Trash Bags	1.1%	0.2%	28,449
Plastic Grocery and Other Merchandise Bags	0.9%	0.2%	22,166
Non-Bag Commercial and Industrial Packaging Film	0.2%	0.2%	4,259
Film Products	0.0%	0.0%	40
Other Film - Flexible Plastic Pouches	0.4%	0.5%	10,380
Other Film - Other	1.7%	0.5%	43,868
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	0.1%	4,237
Durable Plastic Items - Other	1.1%	0.5%	28,424
Remainder/Composite Plastic	3.4%	0.9%	84,962
Other Organic	**44.1%**		**1,112,851**
Food	24.8%	3.3%	625,274
Leaves and Grass	3.0%	2.0%	75,412
Prunings and Trimmings	0.8%	0.7%	19,613
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	7.4%	3.6%	188,044
Carpet	0.6%	0.6%	15,806
Remainder/Composite Organic	7.5%	2.0%	188,702
Inerts and Other	**6.1%**		**153,845**
Concrete	0.4%	0.5%	9,593
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	0.5%	0.5%	13,147
Clean Engineered Wood	0.1%	0.1%	3,328
Clean Pallets & Crates	2.0%	2.2%	50,259
Other Wood Waste	2.1%	1.9%	53,274
Gypsum Board	0.4%	0.4%	10,465
Rock, Soil and Fines	0.3%	0.3%	7,437
Remainder/Composite Inerts and Other	0.3%	0.2%	6,342
Household Hazardous Waste	**0.1%**		**2,071**
Paint	0.0%	0.0%	10
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	911
Mercury-Containing Items - Not Lamps	0.0%	0.0%	8
Lamps - Fluorescent and LED	0.0%	0.0%	56
Remainder/Composite Household Hazardous	0.0%	0.0%	1,086
Special Waste	**3.7%**		**92,535**
Ash	0.1%	0.1%	2,351
Treated Medical Waste	0.7%	1.2%	18,643
Bulky Items	2.8%	2.9%	71,031
Tires	0.0%	0.0%	0
Remainder/Composite Special Waste	0.0%	0.0%	511
Mixed Residue	**3.4%**	**1.2%**	**87,009**
Totals	**100%**		**2,524,183**
Sampled Streams	**52**		

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

Table 168. Detailed Composition – Curbside Recycle: Multi-Family

Material	Estimated Percent	+ / -	Estimated Tons
Paper	**55.3%**		**247,356**
Uncoated Corrugated Cardboard	19.2%	6.1%	86,143
Paper Bags	0.9%	0.6%	4,174
Newspaper	19.2%	12.4%	85,821
White Ledger Paper	2.0%	2.0%	9,148
Other Office Paper	2.8%	1.2%	12,396
Magazines and Catalogs	2.1%	1.2%	9,284
Phone Books and Directories	0.4%	0.6%	1,636
Other Miscellaneous Paper - Compostable	1.5%	0.8%	6,552
Other Miscellaneous Paper - Other	4.3%	1.0%	19,457
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.5%	0.3%	2,310
Remainder/Composite Paper - Compostable	0.4%	0.3%	1,902
Remainder/Composite Paper - Other	1.9%	2.1%	8,535
Glass	**11.3%**		**50,539**
Clear Glass Bottles and Containers - CRV	1.2%	0.6%	5,236
Clear Glass Bottles and Containers - Non-CRV	3.3%	1.7%	14,898
Green Glass Bottles and Containers - CRV	0.4%	0.3%	1,807
Green Glass Bottles and Containers - Non-CRV	3.8%	1.9%	16,856
Brown Glass Bottles and Containers - CRV	2.4%	1.8%	10,589
Brown Glass Bottles and Containers - Non-CRV	0.2%	0.1%	1,109
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	44
Flat Glass	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0
Metal	**3.6%**		**16,197**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	17
Tin/Steel Cans - Other	1.5%	0.9%	6,752
Major Appliances	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0
Other Ferrous	1.4%	2.3%	6,065
Aluminum Cans - CRV	0.2%	0.1%	901
Aluminum Cans - Non-CRV	0.3%	0.2%	1,414
Other Non-Ferrous	0.1%	0.1%	543
Remainder/Composite Metal	0.1%	0.1%	505
Electronics	**1.2%**		**5,246**
Brown Goods	0.0%	0.0%	0
Computer-related Electronics	0.1%	0.1%	445
Other Small Consumer Electronics	0.3%	0.3%	1,468
Video Display Devices - CRT	0.7%	0.8%	3,333
Video Display Devices - Other	0.0%	0.0%	0
Plastic	**14.9%**		**66,791**
PETE Containers - CRV	1.9%	0.5%	8,304
PETE Containers - Non-CRV	3.3%	1.9%	14,742
HDPE Containers - CRV	0.1%	0.2%	483
HDPE Containers - Non-CRV	1.9%	0.8%	8,596
Miscellaneous Plastic Containers - CRV	0.0%	0.1%	204
Miscellaneous Plastic Containers - Non-CRV	1.6%	0.4%	7,198
Plastic Trash Bags	0.4%	0.5%	1,887
Plastic Grocery and Other Merchandise Bags	0.5%	0.2%	2,156
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	19
Film Products	0.1%	0.1%	285
Other Film - Flexible Plastic Pouches	0.0%	0.0%	35
Other Film - Other	1.4%	0.9%	6,219
Durable Plastic Items - #2 and #5 Bulky Rigids	1.8%	3.3%	8,163
Durable Plastic Items - Other	0.4%	0.4%	1,906
Remainder/Composite Plastic	1.5%	0.8%	6,595

Material	Estimated Percent	+ / -	Estimated Tons
Other Organic	**11.4%**		**51,116**
Food	7.0%	8.3%	31,201
Leaves and Grass	0.0%	0.0%	0
Prunings and Trimmings	0.0%	0.0%	0
Branches and Stumps	0.0%	0.0%	0
Manures	0.0%	0.0%	0
Textiles	2.1%	1.2%	9,440
Carpet	0.0%	0.0%	0
Remainder/Composite Organic	2.3%	2.4%	10,474
Inerts and Other	**1.1%**		**4,828**
Concrete	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.0%	0
Clean Dimensional Lumber	1.0%	1.4%	4,596
Clean Engineered Wood	0.0%	0.0%	0
Clean Pallets & Crates	0.0%	0.0%	0
Other Wood Waste	0.0%	0.0%	0
Gypsum Board	0.0%	0.0%	19
Rock, Soil and Fines	0.0%	0.0%	0
Remainder/Composite Inerts and Other	0.0%	0.1%	213
Household Hazardous Waste	**0.0%**		**82**
Paint	0.0%	0.0%	0
Vehicle and Equipment Fluids	0.0%	0.0%	0
Used Oil	0.0%	0.0%	0
Batteries	0.0%	0.0%	38
Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Lamps - Fluorescent and LED	0.0%	0.0%	43
Remainder/Composite Household Hazardous	0.0%	0.0%	0
Special Waste	**1.2%**		**5,416**
Ash	0.0%	0.0%	0
Treated Medical Waste	0.0%	0.0%	0
Bulky Items	0.9%	1.0%	4,073
Tires	0.3%	0.5%	1,343
Remainder/Composite Special Waste	0.0%	0.0%	0
Mixed Residue	**0.0%**	**0.0%**	**96**
Totals	**100%**		**447,666**
Sampled Streams	**42**		

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

Table 169. Detailed Composition – Curbside Organics: Multi-Family

Material	Estimated Percent	+ / -	Estimated Tons	Material	Estimated Percent	+ / -	Estimated Tons
Paper	**1.9%**		**230**	**Other Organic**	**97.6%**		**12,121**
Uncoated Corrugated Cardboard	0.0%	0.0%	0	Food	84.5%	0.0%	10,489
Paper Bags	0.0%	0.0%	0	Leaves and Grass	11.6%	0.0%	1,441
Newspaper	0.0%	0.0%	0	Prunings and Trimmings	1.5%	0.0%	191
White Ledger Paper	0.0%	0.0%	0	Branches and Stumps	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	Carpet	0.0%	0.0%	0
Other Miscellaneous Paper - Compostable	1.9%	0.0%	230	Remainder/Composite Organic	0.0%	0.0%	0
Other Miscellaneous Paper - Other	0.0%	0.0%	0				
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.0%	0.0%	0	**Inerts and Other**	**0.0%**		**0**
Remainder/Composite Paper - Compostable	0.0%	0.0%	0	Concrete	0.0%	0.0%	0
Remainder/Composite Paper - Other	0.0%	0.0%	0	Asphalt Paving	0.0%	0.0%	0
				Asphalt Roofing	0.0%	0.0%	0
Glass	**0.0%**		**0**	Clean Dimensional Lumber	0.0%	0.0%	0
Clear Glass Bottles and Containers - CRV	0.0%	0.0%	0	Clean Engineered Wood	0.0%	0.0%	0
Clear Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0	Clean Pallets & Crates	0.0%	0.0%	0
Green Glass Bottles and Containers - CRV	0.0%	0.0%	0	Other Wood Waste	0.0%	0.0%	0
Green Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Brown Glass Bottles and Containers - CRV	0.0%	0.0%	0	Rock, Soil and Fines	0.0%	0.0%	0
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0	Remainder/Composite Inerts and Other	0.0%	0.0%	0
Other Colored Glass Bottles and Containers - CRV	0.0%	0.0%	0				
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	0.0%	0	**Household Hazardous Waste**	**0.0%**		**0**
Flat Glass	0.0%	0.0%	0	Paint	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
				Used Oil	0.0%	0.0%	0
Metal	**0.0%**		**0**	Batteries	0.0%	0.0%	0
Tin/Steel Cans - CRV Bimetal Containers	0.0%	0.0%	0	Mercury-Containing Items - Not Lamps	0.0%	0.0%	0
Tin/Steel Cans - Other	0.0%	0.0%	0	Lamps - Fluorescent and LED	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Used Oil Filters	0.0%	0.0%	0				
Other Ferrous	0.0%	0.0%	0	**Special Waste**	**0.0%**		**0**
Aluminum Cans - CRV	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Aluminum Cans - Non-CRV	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Other Non-Ferrous	0.0%	0.0%	0	Bulky Items	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Tires	0.0%	0.0%	0
				Remainder/Composite Special Waste	0.0%	0.0%	0
Electronics	**0.0%**		**0**				
Brown Goods	0.0%	0.0%	0	**Mixed Residue**	**0.0%**	**0.0%**	**0**
Computer-related Electronics	0.0%	0.0%	0				
Other Small Consumer Electronics	0.0%	0.0%	0				
Video Display Devices - CRT	0.0%	0.0%	0				
Video Display Devices - Other	0.0%	0.0%	0				
Plastic	**0.5%**		**66**				
PETE Containers - CRV	0.0%	0.0%	0				
PETE Containers - Non-CRV	0.3%	0.0%	33				
HDPE Containers - CRV	0.0%	0.0%	0				
HDPE Containers - Non-CRV	0.0%	0.0%	0				
Miscellaneous Plastic Containers - CRV	0.0%	0.0%	0				
Miscellaneous Plastic Containers - Non-CRV	0.0%	0.0%	0				
Plastic Trash Bags	0.0%	0.0%	0				
Plastic Grocery and Other Merchandise Bags	0.0%	0.0%	0				
Non-Bag Commercial and Industrial Packaging Film	0.0%	0.0%	0				
Film Products	0.0%	0.0%	0				
Other Film - Flexible Plastic Pouches	0.0%	0.0%	0				
Other Film - Other	0.0%	0.0%	0				
Durable Plastic Items - #2 and #5 Bulky Rigids	0.0%	0.0%	0				
Durable Plastic Items - Other	0.0%	0.0%	0	**Totals**	**100%**		**12,417**
Remainder/Composite Plastic	0.3%	0.0%	33	**Sampled Streams**	**3**		

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

Table 170. Detailed Composition – Other Diversion: Multi-Family

None of the selected Multi-Family sites had an Other Diversion stream.

Table 171. Composition Summary with Contamination Detail: Task 3 Generator Sites

Material	Disposed		Curbside Recycle		Curbside Organics		Curbside Overall	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	**24.8%**	**3,103,842**	**74.3%**	**1,821,018**	**1.1%**	**18,287**	**29.6%**	**4,943,147**
Uncoated Corrugated Cardboard	1.9%	235,028	45.3%	1,110,460	0.2%	3,198	8.1%	1,348,685
Clean	*1.2%*	*155,292*	*42.3%*	*1,035,182*	*0.2%*	*3,116*	*7.1%*	*1,193,591*
Bin Contaminated	*0.6%*	*71,482*	*0.7%*	*17,201*	*0.0%*	*63*	*0.5%*	*88,747*
Source Contaminated	*0.1%*	*8,253*	*2.4%*	*58,076*	*0.0%*	*18*	*0.4%*	*66,347*
Paper Bags	0.4%	47,970	0.7%	16,493	0.0%	39	0.4%	64,502
Clean	*0.2%*	*19,268*	*0.7%*	*15,945*	*0.0%*	*39*	*0.2%*	*35,252*
Bin Contaminated	*0.2%*	*21,988*	*0.0%*	*62*	*0.0%*	*0*	*0.1%*	*22,050*
Source Contaminated	*0.1%*	*6,714*	*0.0%*	*485*	*0.0%*	*0*	*0.0%*	*7,200*
Newspaper	2.0%	244,635	5.1%	123,942	0.0%	857	2.2%	369,434
Clean	*0.8%*	*104,316*	*3.6%*	*89,170*	*0.0%*	*45*	*1.2%*	*193,530*
Bin Contaminated	*1.0%*	*120,611*	*1.4%*	*34,772*	*0.0%*	*812*	*0.9%*	*156,196*
Source Contaminated	*0.2%*	*19,708*	*0.0%*	*0*	*0.0%*	*0*	*0.1%*	*19,708*
White Ledger Paper	1.4%	171,116	5.6%	136,703	0.0%	48	1.8%	307,867
Clean	*0.9%*	*119,029*	*5.5%*	*133,712*	*0.0%*	*0*	*1.5%*	*252,741*
Bin Contaminated	*0.3%*	*43,706*	*0.1%*	*1,867*	*0.0%*	*48*	*0.3%*	*45,621*
Source Contaminated	*0.1%*	*8,382*	*0.0%*	*1,123*	*0.0%*	*0*	*0.1%*	*9,505*
Other Office Paper	1.4%	179,505	4.4%	108,210	0.0%	414	1.7%	288,130
Clean	*0.9%*	*116,385*	*4.2%*	*103,406*	*0.0%*	*45*	*1.3%*	*219,837*
Bin Contaminated	*0.5%*	*57,112*	*0.1%*	*3,071*	*0.0%*	*369*	*0.4%*	*60,553*
Source Contaminated	*0.0%*	*6,007*	*0.1%*	*1,733*	*0.0%*	*0*	*0.0%*	*7,740*
Magazines and Catalogs	0.6%	76,374	3.4%	83,415	0.0%	0	1.0%	159,788
Clean	*0.4%*	*44,032*	*3.3%*	*79,857*	*0.0%*	*0*	*0.7%*	*123,889*
Bin Contaminated	*0.1%*	*8,720*	*0.1%*	*1,540*	*0.0%*	*0*	*0.1%*	*10,260*
Source Contaminated	*0.2%*	*23,621*	*0.1%*	*2,018*	*0.0%*	*0*	*0.2%*	*25,639*
Phone Books and Directories	0.0%	4,071	0.1%	2,593	0.0%	0	0.0%	6,664
Clean	*0.0%*	*2,097*	*0.1%*	*2,025*	*0.0%*	*0*	*0.0%*	*4,123*
Bin Contaminated	*0.0%*	*377*	*0.0%*	*417*	*0.0%*	*0*	*0.0%*	*793*
Source Contaminated	*0.0%*	*1,597*	*0.0%*	*151*	*0.0%*	*0*	*0.0%*	*1,748*
Other Miscellaneous Paper - Compostable	0.4%	45,579	2.6%	62,821	0.5%	8,218	0.7%	116,618
Clean	*0.1%*	*14,048*	*2.0%*	*47,765*	*0.4%*	*6,065*	*0.4%*	*67,878*
Bin Contaminated	*0.1%*	*14,805*	*0.1%*	*1,779*	*0.0%*	*397*	*0.1%*	*16,981*
Source Contaminated	*0.1%*	*16,727*	*0.5%*	*13,277*	*0.1%*	*1,756*	*0.2%*	*31,760*
Other Miscellaneous Paper - Other	3.2%	395,692	5.1%	125,165	0.0%	622	3.1%	521,479
Clean	*1.4%*	*174,951*	*4.8%*	*118,719*	*0.0%*	*420*	*1.8%*	*294,090*
Bin Contaminated	*1.4%*	*175,361*	*0.1%*	*1,496*	*0.0%*	*202*	*1.1%*	*177,059*
Source Contaminated	*0.4%*	*45,380*	*0.2%*	*4,950*	*0.0%*	*0*	*0.3%*	*50,330*

Table 171 continued.

Material	Disposed Est. %	Disposed Est. Tons	Curbside Recycle Est. %	Curbside Recycle Est. Tons	Curbside Organics Est. %	Curbside Organics Est. Tons	Curbside Overall Est. %	Curbside Overall Est. Tons
Remainder/Composite Paper - Rigid Food & Beverage Cartons	0.6%	73,933	0.2%	4,767	0.0%	587	0.5%	79,287
Clean	*0.0%*	*5,427*	*0.2%*	*4,519*	*0.0%*	*0*	*0.1%*	*9,946*
Bin Contaminated	*0.0%*	*2,608*	*0.0%*	*146*	*0.0%*	*587*	*0.0%*	*3,341*
Source Contaminated	*0.5%*	*65,898*	*0.0%*	*102*	*0.0%*	*0*	*0.4%*	*66,000*
Remainder/Composite Paper - Compostable	10.4%	1,300,272	0.8%	18,882	0.2%	3,978	7.9%	1,323,132
Clean	*1.6%*	*194,629*	*0.6%*	*14,581*	*0.0%*	*0*	*1.3%*	*209,210*
Bin Contaminated	*0.1%*	*7,396*	*0.0%*	*51*	*0.2%*	*3,954*	*0.1%*	*11,402*
Source Contaminated	*8.8%*	*1,098,247*	*0.2%*	*4,250*	*0.0%*	*23*	*6.6%*	*1,102,521*
Remainder/Composite Paper - Other	2.6%	329,667	1.1%	27,568	0.0%	327	2.1%	357,561
Clean	*0.7%*	*86,918*	*0.7%*	*17,728*	*0.0%*	*0*	*0.6%*	*104,646*
Bin Contaminated	*0.8%*	*99,214*	*0.0%*	*211*	*0.0%*	*327*	*0.6%*	*99,753*
Source Contaminated	*1.1%*	*143,534*	*0.4%*	*9,629*	*0.0%*	*0*	*0.9%*	*153,163*
Glass	**2.0%**	**245,052**	**6.3%**	**155,335**	**0.8%**	**13,898**	**2.5%**	**414,285**
Clear Glass Bottles and Containers - CRV	0.4%	54,505	1.2%	29,604	0.0%	424	0.5%	84,533
Clear Glass Bottles and Containers - Non-CRV	0.4%	48,486	1.7%	41,179	0.3%	4,628	0.6%	94,292
Green Glass Bottles and Containers - CRV	0.1%	12,200	0.4%	9,563	0.0%	0	0.1%	21,762
Green Glass Bottles and Containers - Non-CRV	0.3%	36,110	1.9%	45,811	0.4%	7,325	0.5%	89,246
Brown Glass Bottles and Containers - CRV	0.3%	32,698	0.9%	20,823	0.0%	397	0.3%	53,918
Brown Glass Bottles and Containers - Non-CRV	0.0%	5,293	0.3%	6,551	0.1%	1,125	0.1%	12,969
Other Colored Glass Bottles and Containers - CRV	0.0%	297	0.0%	0	0.0%	0	0.0%	297
Other Colored Glass Bottles and Containers - Non-CRV	0.0%	667	0.0%	349	0.0%	0	0.0%	1,016
Flat Glass	0.1%	17,071	0.0%	6	0.0%	0	0.1%	17,077
Remainder/Composite Glass	0.3%	37,725	0.1%	1,450	0.0%	0	0.2%	39,175
Metal	**3.4%**	**425,498**	**2.0%**	**48,567**	**0.1%**	**1,117**	**2.8%**	**475,182**
Tin/Steel Cans - CRV Bimetal Containers	0.0%	5,449	0.1%	1,299	0.0%	22	0.0%	6,770
Clean	*0.0%*	*1,104*	*0.1%*	*1,260*	*0.0%*	*22*	*0.0%*	*2,386*
Bin Contaminated	*0.0%*	*0*	*0.0%*	*0*	*0.0%*	*0*	*0.0%*	*0*
Source Contaminated	*0.0%*	*4,345*	*0.0%*	*39*	*0.0%*	*0*	*0.0%*	*4,384*
Tin/Steel Cans - Other	0.6%	72,554	0.9%	22,336	0.0%	617	0.6%	95,507
Clean	*0.2%*	*20,125*	*0.5%*	*13,466*	*0.0%*	*0*	*0.2%*	*33,591*
Bin Contaminated	*0.0%*	*6,214*	*0.0%*	*0*	*0.0%*	*617*	*0.0%*	*6,831*
Source Contaminated	*0.4%*	*46,215*	*0.4%*	*8,870*	*0.0%*	*0*	*0.3%*	*55,085*
Major Appliances	0.0%	2,132	0.0%	0	0.0%	0	0.0%	2,132
Used Oil Filters	0.0%	423	0.0%	0	0.0%	0	0.0%	423
Other Ferrous	0.7%	91,492	0.5%	11,474	0.0%	55	0.6%	103,021

Table 171 continued.

Material	Disposed Est. %	Disposed Est. Tons	Curbside Recycle Est. %	Curbside Recycle Est. Tons	Curbside Organics Est. %	Curbside Organics Est. Tons	Curbside Overall Est. %	Curbside Overall Est. Tons
Aluminum Cans - CRV	0.1%	18,291	0.2%	4,610	0.0%	84	0.1%	22,984
Clean	*0.1%*	*13,151*	*0.2%*	*4,610*	*0.0%*	*62*	*0.1%*	*17,823*
Bin Contaminated	*0.0%*	*1,261*	*0.0%*	*0*	*0.0%*	*20*	*0.0%*	*1,281*
Source Contaminated	*0.0%*	*3,879*	*0.0%*	*0*	*0.0%*	*2*	*0.0%*	*3,880*
Aluminum Cans - Non-CRV	0.0%	6,074	0.1%	3,087	0.0%	0	0.1%	9,161
Clean	*0.0%*	*2,787*	*0.1%*	*2,151*	*0.0%*	*0*	*0.0%*	*4,938*
Bin Contaminated	*0.0%*	*161*	*0.0%*	*0*	*0.0%*	*0*	*0.0%*	*161*
Source Contaminated	*0.0%*	*3,126*	*0.0%*	*936*	*0.0%*	*0*	*0.0%*	*4,061*
Other Non-Ferrous	0.8%	94,321	0.2%	3,821	0.0%	334	0.6%	98,477
Remainder/Composite Metal	1.1%	134,763	0.1%	1,941	0.0%	4	0.8%	136,708
Electronics	**0.5%**	**57,866**	**0.3%**	**7,647**	**0.0%**	**13**	**0.4%**	**65,526**
Brown Goods	0.1%	15,168	0.0%	0	0.0%	0	0.1%	15,168
Computer-related Electronics	0.1%	6,567	0.1%	2,299	0.0%	0	0.1%	8,866
Other Small Consumer Electronics	0.0%	4,020	0.1%	2,016	0.0%	13	0.0%	6,049
Video Display Devices - CRT	0.2%	23,969	0.1%	3,333	0.0%	0	0.2%	27,302
Video Display Devices - Other	0.1%	8,141	0.0%	0	0.0%	0	0.0%	8,141
Plastic	**12.6%**	**1,578,221**	**9.8%**	**240,777**	**0.2%**	**3,861**	**10.9%**	**1,822,859**
PETE Containers - CRV	0.4%	44,977	0.8%	20,750	0.0%	432	0.4%	66,159
Clean	*0.2%*	*31,151*	*0.8%*	*20,186*	*0.0%*	*373*	*0.3%*	*51,710*
Bin Contaminated	*0.0%*	*1,258*	*0.0%*	*0*	*0.0%*	*59*	*0.0%*	*1,316*
Source Contaminated	*0.1%*	*12,569*	*0.0%*	*564*	*0.0%*	*0*	*0.1%*	*13,133*
PETE Containers - Non-CRV	0.3%	34,034	1.3%	31,687	0.0%	198	0.4%	65,918
Clean	*0.0%*	*6,092*	*0.8%*	*18,511*	*0.0%*	*32*	*0.1%*	*24,636*
Bin Contaminated	*0.0%*	*1,098*	*0.0%*	*487*	*0.0%*	*152*	*0.0%*	*1,737*
Source Contaminated	*0.2%*	*26,843*	*0.5%*	*12,689*	*0.0%*	*13*	*0.2%*	*39,545*
HDPE Containers - CRV	0.1%	7,350	0.1%	1,331	0.0%	0	0.1%	8,681
Clean	*0.0%*	*3,863*	*0.1%*	*1,318*	*0.0%*	*0*	*0.0%*	*5,181*
Bin Contaminated	*0.0%*	*0*	*0.0%*	*0*	*0.0%*	*0*	*0.0%*	*0*
Source Contaminated	*0.0%*	*3,487*	*0.0%*	*13*	*0.0%*	*0*	*0.0%*	*3,500*
HDPE Containers - Non-CRV	0.5%	58,689	1.1%	27,023	0.0%	78	0.5%	85,790
Clean	*0.1%*	*10,182*	*0.8%*	*20,752*	*0.0%*	*23*	*0.2%*	*30,956*
Bin Contaminated	*0.0%*	*1,333*	*0.1%*	*1,561*	*0.0%*	*56*	*0.0%*	*2,950*
Source Contaminated	*0.4%*	*47,174*	*0.2%*	*4,710*	*0.0%*	*0*	*0.3%*	*51,884*
Miscellaneous Plastic Containers - CRV	0.0%	5,198	0.0%	299	0.0%	0	0.0%	5,497
Clean	*0.0%*	*1,229*	*0.0%*	*282*	*0.0%*	*0*	*0.0%*	*1,511*
Bin Contaminated	*0.0%*	*256*	*0.0%*	*0*	*0.0%*	*0*	*0.0%*	*256*
Source Contaminated	*0.0%*	*3,713*	*0.0%*	*17*	*0.0%*	*0*	*0.0%*	*3,730*

Table 171 continued.

Material	Disposed		Curbside Recycle		Curbside Organics		Curbside Overall	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Miscellaneous Plastic Containers - Non-CRV	0.4%	45,830	1.4%	34,175	0.0%	298	0.5%	80,303
Clean	*0.1%*	*9,717*	*1.2%*	*28,259*	*0.0%*	*197*	*0.2%*	*38,172*
Bin Contaminated	*0.0%*	*1,032*	*0.0%*	*0*	*0.0%*	*50*	*0.0%*	*1,083*
Source Contaminated	*0.3%*	*35,081*	*0.2%*	*5,916*	*0.0%*	*52*	*0.2%*	*41,048*
Plastic Trash Bags	2.4%	302,596	0.3%	7,400	0.0%	188	1.9%	310,185
Plastic Grocery and Other Merchandise Bags	0.3%	37,387	0.4%	9,412	0.0%	42	0.3%	46,842
Non-Bag Commercial and Industrial Packaging Film	0.5%	62,285	0.7%	18,324	0.0%	138	0.5%	80,748
Film Products	0.0%	410	0.1%	2,212	0.0%	25	0.0%	2,646
Other Film - Flexible Plastic Pouches	0.2%	20,955	0.0%	370	0.0%	3	0.1%	21,328
Other Film - Other	2.1%	261,571	0.9%	21,289	0.1%	1,980	1.7%	284,840
Durable Plastic Items - #2 and #5 Bulky Rigids	0.1%	15,179	1.0%	24,758	0.0%	0	0.2%	39,938
Durable Plastic Items - Other	1.0%	122,409	0.4%	10,730	0.0%	57	0.8%	133,196
Remainder/Composite Plastic	4.5%	559,352	1.3%	31,015	0.0%	421	3.5%	590,787
Other Organic	**42.8%**	**5,361,069**	**5.1%**	**124,610**	**97.8%**	**1,678,409**	**42.9%**	**7,164,088**
Food	26.5%	3,320,900	2.7%	65,473	16.1%	275,510	21.9%	3,661,883
Leaves and Grass	3.5%	432,571	0.0%	416	80.1%	1,373,674	10.8%	1,806,661
Prunings and Trimmings	2.1%	259,666	0.3%	6,269	1.7%	28,603	1.8%	294,538
Branches and Stumps	0.5%	62,394	0.7%	17,723	0.0%	0	0.5%	80,117
Manures	0.2%	19,153	0.0%	0	0.0%	0	0.1%	19,153
Textiles	2.0%	253,061	0.5%	13,430	0.0%	622	1.6%	267,113
Carpet	1.0%	125,287	0.3%	6,989	0.0%	0	0.8%	132,275
Remainder/Composite Organic	7.1%	888,038	0.6%	14,309	0.0%	0	5.4%	902,347
Inerts and Other	**11.3%**	**1,418,799**	**1.6%**	**39,776**	**0.0%**	**310**	**8.7%**	**1,458,886**
Concrete	0.7%	81,557	0.0%	0	0.0%	0	0.5%	81,557
Asphalt Paving	0.2%	31,303	0.0%	0	0.0%	0	0.2%	31,303
Asphalt Roofing	0.4%	49,313	0.0%	50	0.0%	0	0.3%	49,363
Clean Dimensional Lumber	0.5%	67,672	0.6%	15,264	0.0%	0	0.5%	82,936
Clean Engineered Wood	4.0%	500,082	0.7%	18,139	0.0%	0	3.1%	518,220
Clean Pallets & Crates	0.3%	35,839	0.0%	0	0.0%	0	0.2%	35,839
Other Wood Waste	2.0%	249,903	0.0%	177	0.0%	0	1.5%	250,080
Gypsum Board	0.3%	40,106	0.0%	556	0.0%	0	0.2%	40,662
Rock, Soil and Fines	1.2%	153,139	0.0%	0	0.0%	310	0.9%	153,449
Remainder/Composite Inerts and Other	1.7%	209,885	0.2%	5,591	0.0%	0	1.3%	215,476

Table 171 continued.

Material	Disposed		Curbside Recycle		Curbside Organics		Curbside Overall	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Household Hazardous Waste	**0.2%**	**22,586**	**0.0%**	**816**	**0.0%**	**14**	**0.1%**	**23,415**
Paint	0.1%	9,172	0.0%	0	0.0%	0	0.1%	9,172
Vehicle and Equipment Fluids	0.0%	938	0.0%	0	0.0%	0	0.0%	938
Used Oil	0.0%	56	0.0%	404	0.0%	0	0.0%	460
Batteries	0.0%	1,790	0.0%	304	0.0%	14	0.0%	2,108
Mercury-Containing Items - Not Lamps	0.0%	20	0.0%	0	0.0%	0	0.0%	20
Lamps - Fluorescent and LED	0.0%	660	0.0%	80	0.0%	0	0.0%	740
Remainder/Composite Household Hazardous	0.1%	9,951	0.0%	27	0.0%	0	0.1%	9,978
Special Waste	**1.7%**	**219,007**	**0.3%**	**7,215**	**0.0%**	**0**	**1.4%**	**226,222**
Ash	0.3%	33,007	0.0%	0	0.0%	0	0.2%	33,007
Treated Medical Waste	0.0%	4,939	0.0%	347	0.0%	0	0.0%	5,286
Bulky Items	1.3%	158,435	0.2%	4,788	0.0%	0	1.0%	163,222
Tires	0.0%	2,702	0.1%	1,383	0.0%	0	0.0%	4,086
Remainder/Composite Special Waste	0.2%	19,923	0.0%	698	0.0%	0	0.1%	20,621
Mixed Residue	**0.8%**	**100,847**	**0.1%**	**3,577**	**0.0%**	**0**	**0.6%**	**104,424**
Totals	**100.0%**	**12,532,786**	**100.0%**	**2,449,337**	**100.0%**	**1,715,909**	**100.0%**	**16,698,032**

Percentages for material types may not total 100% due to rounding.

Tons are estimates for businesses and apartments statewide with curbside diversion

Appendix F: Other Analysis Tables

Table 172. Statewide Employment Rankings, by Group

	Statewide Employment*	% of Statewide Employment	Rank by Employment
Services - Professional, Technical, & Financial	2,141,914	15%	1
Services - Management, Administrative, Support, & Social	2,034,556	14%	2
Medical & Health	1,491,950	10%	3
Education	1,317,936	9%	4
Restaurants	1,197,110	8%	5
Retail Trade - All Other	1,137,123	8%	6
Not Elsewhere Classified	1,077,373	7%	7
Manufacturing - All Other	846,906	6%	8
Public Administration	802,458	5%	9
Durable Wholesale & Trucking	641,600	4%	10
Manufacturing - Food & Nondurable Wholesale	456,830	3%	11
Retail Trade - Food & Beverage Stores	344,256	2%	12
Arts, Entertainment, & Recreation	324,080	2%	13
Services - Repair & Personal	300,627	2%	14
Manufacturing - Electronic Equipment	290,224	2%	15
Hotels & Lodging	222,871	2%	16
Overall Commercial	**14,627,814**	**100%**	

*Employment based on 2013 data provided by CalRecycle

Table 173. Tons Disposed Rankings, by Group

	Tons Disposed	% of Comm. Disposal	Rank by Tons Disposed
Services - Professional, Technical, & Financial	3,994,643	24%	1
Restaurants	2,876,653	17%	2
Retail Trade - All Other	2,433,989	15%	3
Services - Management, Administrative, Support, & Social	1,514,667	9%	4
Medical & Health	1,003,316	6%	5
Arts, Entertainment, & Recreation	829,661	5%	6
Manufacturing - Food & Nondurable Wholesale	582,486	4%	7
Education	562,442	3%	8
Not Elsewhere Classified	538,858	3%	9
Retail Trade - Food & Beverage Stores	417,791	3%	10
Hotels & Lodging	384,327	2%	11
Manufacturing - All Other	384,292	2%	12
Durable Wholesale & Trucking	381,767	2%	13
Services - Repair & Personal	281,371	2%	14
Public Administration	259,137	2%	15
Manufacturing - Electronic Equipment	91,265	1%	16
Overall Commercial	**16,536,664**	**100%**	

Table 174. Tons Diverted Rankings, by Group

	Tons Diverted	% of Comm. Diversion	Rank by Tons Diverted
Retail Trade - Food & Beverage Stores	1,868,403	20%	1
Durable Wholesale & Trucking	1,538,803	16%	2
Services - Management, Administrative, Support, & Social	1,417,462	15%	3
Services - Professional, Technical, & Financial	949,869	10%	4
Manufacturing - All Other	885,586	9%	5
Not Elsewhere Classified	750,291	8%	6
Restaurants	617,826	7%	7
Retail Trade - All Other	306,012	3%	8
Manufacturing - Food & Nondurable Wholesale	261,646	3%	9
Services - Repair & Personal	170,866	2%	10
Arts, Entertainment, & Recreation	168,036	2%	11
Manufacturing - Electronic Equipment	125,666	1%	12
Education	97,926	1%	13
Hotels & Lodging	93,712	1%	14
Medical & Health	93,629	1%	15
Public Administration	50,354	1%	16
Overall Commercial	**9,396,087**	**100%**	

Table 175. Tons Generated Rankings, by Group

	Tons Generated	% of Comm. Generation	Rank by Tons Generated
Services - Professional, Technical, & Financial	4,944,512	19%	1
Restaurants	3,494,479	13%	2
Services - Management, Administrative, Support, & Social	2,932,129	11%	3
Retail Trade - All Other	2,740,001	11%	4
Retail Trade - Food & Beverage Stores	2,286,193	9%	5
Durable Wholesale & Trucking	1,920,570	7%	6
Not Elsewhere Classified	1,289,149	5%	7
Manufacturing - All Other	1,269,878	5%	8
Medical & Health	1,096,945	4%	9
Arts, Entertainment, & Recreation	997,697	4%	10
Manufacturing - Food & Nondurable Wholesale	844,131	3%	11
Education	660,368	3%	12
Hotels & Lodging	478,039	2%	13
Services - Repair & Personal	452,237	2%	14
Public Administration	309,491	1%	15
Manufacturing - Electronic Equipment	216,931	1%	16
Overall Commercial	**25,932,751**	**100%**	

Table 176. Generation Rate Summary by Weight, by Group (TPEPY) Calculated with Total Employees Instead of Full Time Employees

Group Number and Name		Tons per Employee per Year					Diversion Rate
		Disposed	Curbside Recycle	Curbside Organics	Other Diversion	Generation	
Overall Commercial Sector		**0.93**	**0.12**	**0.10**	**0.34**	**1.48**	**38%**
1	Arts, Entertainment, & Recreation	1.94	0.12	0.02	0.23	**2.30**	16%
2	Durable Wholesale & Trucking	0.57	0.16	0.00	2.17	**2.91**	80%
3	Education	0.38	0.04	0.01	0.02	**0.45**	15%
4	Hotels & Lodging	1.40	0.19	0.01	0.16	**1.76**	20%
5	Manufacturing - Electronic Equipment	0.31	0.07	0.00	0.36	**0.75**	58%
6	Manufacturing - Food & Nondurable Wholesale	1.23	0.05	0.01	0.50	**1.79**	31%
7	Manufacturing - All Other	0.44	0.10	0.00	0.93	**1.47**	70%
8	Medical & Health	0.57	0.04	0.00	0.01	**0.63**	9%
9	Public Administration	0.30	0.04	0.00	0.02	**0.37**	17%
10	Restaurants	1.57	0.18	0.12	0.06	**1.92**	18%
11	Retail Trade - Food & Beverage Stores	0.94	0.11	0.10	3.94	**5.08**	82%
12	Retail Trade - All Other	1.74	0.08	0.00	0.14	**1.96**	11%
13	Services - Management, Administrative, Support, & Social	0.60	0.09	0.48	0.01	**1.18**	49%
14	Services - Professional, Technical, & Financial	1.61	0.30	0.08	0.04	**2.02**	20%
15	Services - Repair & Personal	0.85	0.13	0.21	0.17	**1.36**	37%
16	Not Elsewhere Classified	0.46	0.04	0.01	0.58	**1.09**	58%
17	**Multifamily***	**0.74**	**0.13**	**0.00**		**0.87**	**15%**

**Multifamily is reported in tons per unit per year*

Table 177. Generation Rate Summary by Volume, by Group (YPEPY) Calculated with Total Employees Instead of Full Time Employees

Group Number and Name		Cubic Yards per Employee per Year			
		Disposed	**Curbside Recycle**	**Curbside Organics**	**Curbside Total**
Overall Commercial Sector		**13.49**	**3.98**	**1.45**	**18.91**
1	Arts, Entertainment, & Recreation	17.87	5.23	0.34	**23.44**
2	Durable Wholesale & Trucking	11.90	2.56	0.00	**14.46**
3	Education	6.15	2.19	0.15	**8.48**
4	Hotels & Lodging	18.92	4.39	0.19	**23.49**
5	Manufacturing - Electronic Equipment	7.02	2.89	0.00	**9.91**
6	Manufacturing - Food & Nondurable Wholesale	15.35	1.75	0.14	**17.24**
7	Manufacturing - All Other	10.17	3.11	0.00	**13.29**
8	Medical & Health	10.14	2.69	0.10	**12.93**
9	Public Administration	4.89	1.52	0.08	**6.49**
10	Restaurants	19.88	6.75	0.62	**27.25**
11	Retail Trade - Food & Beverage Stores	19.26	6.09	1.42	**26.76**
12	Retail Trade - All Other	24.99	5.78	0.00	**30.76**
13	Services - Management, Administrative, Support, & Social	10.65	2.54	7.85	**21.04**
14	Services - Professional, Technical, & Financial	17.59	7.11	1.49	**26.19**
15	Services - Repair & Personal	20.68	6.64	0.00	**27.31**
16	Not Elsewhere Classified	9.66	2.13	0.15	**11.94**
17	**Multifamily***	**15.50**	**5.09**	**0.04**	**20.63**

**Multifamily is reported in cubic yards per unit per year*

Appendix G: Recommendations for Future Studies

The project team spent nearly two years planning the study, executing the fieldwork, and evaluating the field data. Over the course of the project we learned that:

- Everything will take twice as long as expected.
- A firm commitment from the node facilities should be received before beginning recruitment. The project team spent many days chasing sort locations when node facilities backed out at the last minute.
- Field schedules should be flexible to ensure that each season's business recruitment is completed prior to beginning fieldwork.
- A process for handling the data analysis for generators with mixed-waste processing should be articulated prior to beginning fieldwork.
- Obtaining cooperation from the local haulers is critical. Accurate estimates of the collection schedule at each business increases the fieldwork efficiency. The hauler is the only entity with reasonably accurate collection information; the generator sites rarely know their collection schedule, much less the time of collection.
- Not every site will be able to provide complete quantity and composition data. Budget to make approximately 10 percent more site visits than the goal.
- 200 pounds is too large for generator waste samples. Many businesses were dropped from the recruitment process because it takes them several weeks to generate 200 pounds of disposed waste.
- Identity theft and privacy concerns will continue to make random business recruitment more and more difficult.
- Chains and large corporations are particularly difficult to recruit because of their corporate bureaucracy.
- Carefully define the waste streams so that it is clear what counts as curbside diversion and what counts as Other Diversion. A business that bales its cardboard, for example, falls into a gray area: Is it Curbside Recycle or Other Diversion?

Preparing for and addressing these items will help future studies run smoothly.

Appendix H: Health and Safety Plan

Cascadia Consulting Group, Inc.'s health and safety plan is detailed below.

1. RESPONSIBILITY

The Cascadia Human Resources department (HR) has the responsibility for implementing and maintaining the Health and Safety Program for Cascadia Consulting Group, Inc. Cascadia supervisors and project managers are responsible for implementing and maintaining safe working practices in their work areas and for answering worker questions about the Health and Safety Plan. A copy of this Health and Safety Plan is provided to all Cascadia Consulting Group, Inc. employees on the intranet (under the HR tab) and reviewed with new employees during the onboarding process.

The Cascadia Consulting Group, Inc. Health and Safety Plan is not a static plan. As conditions and situations arise, this Health and Safety Plan will be updated and augmented in accordance with OSHA and MSHA standards.

2. COMPLIANCE

All workers, including supervisors, are responsible for complying with safe and healthful work practices. Our goal is to ensure that all Cascadia Consulting Group, Inc. workers understand and comply with these practices. To accomplish this, our procedures include informing workers of the provisions of our program via training of current staff and new staff, evaluating the ongoing safety performance of all workers, and providing additional training to workers whose safety performance may be deficient.

The employees of Cascadia Consulting Group, Inc. often perform their duties as visitors to disposal facilities. The procedures described in our program in no way supersede requirements which may already be in place at these facilities. Instead, this plan is designed to augment and work in conjunction with any site safety plans in place at these facilities. We follow all facility safety requirements that are more stringent than our own. When our safety procedures exceed those of our host, workers must follow our procedures, regardless of whether the host facility has any such requirements.

3. COMMUNICATION

Cascadia Consulting Group, Inc. is committed to providing a safe work environment for all of its workers. All supervisors and/or project managers are responsible for communicating with all workers about occupational safety and health in a form readily understood by all workers. Workers are encouraged to inform their supervisors and/or HR about workplace hazards without fear of reprisal. If you discover something that could cause injury or is unsafe, tell your manager or supervisor immediately.

Cascadia Consulting Group, Inc. routinely communicates with and instructs employees about general safe work practices and hazards unique to each employee's job assignment. Our overall communication system includes the following elements:

- New worker orientation, which includes a discussion of safety and health policies and procedures

- Worker training in the specific protocols of our field procedures
- Scheduled and “tailgate” safety meetings
- Posted or distributed safety information
- Periodic review of our Health and Safety Program

The employee’s supervisor is responsible for ensuring that all field personnel have read and understood the master copy of this Health and Safety Plan document, and that all workers have received orientation and training in the safety protocols to be followed in conducting our work.

Each supervisor and project manager has the duty and responsibility to:

- Ensure that the procedures in this document are followed.
- Be familiar with local emergency services, and maintain a list of emergency phone numbers.
- Conduct “tailgate” health and safety meetings to notify workers of any changes in safety protocol.
- Inspect personal protective equipment and ensure proper use of such equipment.
- Monitor on-site hazards and early health warning signs (e.g., heat stress/stroke, dehydration, or fatigue) of site personnel.
- Stop unsafe operations and summon emergency services when needed.

The supervisor and/or project manager will brief workers on health and safety protocols particular to the host site. This will include emergency evacuation and rally point information to ensure that, in the event of an emergency, all Cascadia Consulting Group, Inc. workers will adhere to site-specific evacuation and management procedures.

4. HAZARD ASSESSMENT AND PREVENTION

We perform assessments of possible work hazards, and the procedures to work safely around them, when:

- New substances, processes, procedures, or equipment that present potential new hazards are introduced into our workplace.
- New, previously unidentified hazards are recognized.
- Workplace conditions warrant an assessment.
- Occupational injuries and illnesses occur.

On a daily basis, supervisors and/or project managers are to identify and evaluate workplace hazards that may be present at each work site. We routinely encounter the same day-to-day risks when we conduct our work. Yet, each facility is different and may present unique hazards that can affect us. These are some possible hazards that may occur during our work:

Physical hazards:

- Cuts and punctures
- Lifting
- Slipping and falling
- Heat stress and fatigue
- Traffic or heavy equipment movement
- Noise exposure
- Animal and/or insect bites

Airborne contaminants:

- Dust and windblown debris

Chemical hazards:

- Liquid spills from containers
- Household and hazardous chemicals

Biological hazards:

- Household hazardous wastes
- Medical wastes
- Items contaminated with blood/body fluid
- Hypodermic needles

Vaccinations

Due to the nature of waste composition sampling, exposures to airborne pathogens and subcutaneous introduction of pathogens are possible. In accordance with OSHA regulations, Cascadia employees who will be performing work in which they may be exposed to airborne pathogens and subcutaneous introduction of pathogens will be offered tetanus and hepatitis B vaccines at the cost of Cascadia Consulting Group, Inc. An employee may decline to accept the vaccination by signing a statement acknowledging that: (1) he or she understands that he or she is at risk of acquiring the hepatitis B virus infection; (2) he or she has been given the opportunity to be vaccinated at no charge; and (3) he or she is declining the vaccination at the present time but

understands that if he or she continues to be at risk, he or she will still be able to receive the vaccination series at no charge.

5. ACCIDENT/EXPOSURE INVESTIGATIONS

Procedures for investigating workplace accidents and hazardous substance exposures include:

- Interviewing injured workers and witnesses.
- Examining the workplace for factors associated with the accident/exposure.
- Determining the cause of the accident/exposure.
- Taking corrective action to prevent the accident/exposure from reoccurring.
- Recording the findings and actions taken.

6. HAZARD CORRECTION

Timely corrective action will be taken to remedy an unsafe condition, practice or procedure. When an imminent hazard exists that cannot be immediately abated without endangering employee(s) and/or property, we will remove all exposed workers from the area.

7. TRAINING AND INSTRUCTION

All Cascadia Consulting Group, Inc. workers, including supervisors, shall have training and instruction on general and job-specific safety and health practices. Training and instruction is provided:

- To all new workers who will be performing fieldwork.
- To all workers given new job assignments for which training has not been previously provided.
- Whenever new substances, processes, procedures, or equipment are introduced to the workplace that present a new hazard.
- Whenever Cascadia Consulting Group, Inc. is made aware of a new or previously unrecognized hazard.
- To supervisors to familiarize them with the safety and health hazards to which workers may be exposed.
- To all workers with respect to hazards specific to each employee's job assignment.

Cascadia Consulting Group provides for its workers the proper safety equipment for performance of duties associated with waste sampling. These items include:

- Coveralls or protective outer wear (optional)

- Rubber gloves and liners (required)
- Lower back support apparatus (optional)
- Hearing protection (optional/based on site requirements)
- Safety glasses (optional/based on site requirements)
- Reflective safety vests (required)
- Hard hats and liners (required)
- Knee pads (optional)
- Tetanus and hepatitis B vaccinations (required, or sign waiver)

During the conduct of our fieldwork, the following personnel health and safety guidelines are to be followed:

- Be in good physical condition, maintain a current tetanus booster and hepatitis B shot, and not be oversensitive to odors and dust.
- Be able to communicate in English, and be able to read warning signs/labels.
- Routinely check personal protective equipment and work clothing for proper fit and condition; replace or repair defective items immediately.
- Always look at what you are picking up or sorting—the most effective way to prevent cuts and punctures is to see what you are handling. Use a small rake or shovel to move material around for sorting.
- Lift properly, and ask for assistance when lifting heavy or bulky items.
- Be on the lookout for slipping and tripping hazards.
- Do not attempt to identify unknown chemical substances in unlabeled containers; never sniff anything to see what it is.
- Wash hands and face before eating or drinking.
- Smoke only in designated areas.
- Consume plenty of fluids during hot days, and watch for signs of heat-related illness, both in yourself and your crewmates.
- Be aware of your surroundings and alert to the possibility of unexpected hazards.
- Alert your supervisor if you feel ill, overly fatigued, or injured.
- Treat even minor cuts and injuries immediately.