

Seattle Public Utilities

1996

Commercial and Self-Haul Waste Streams

Composition Study

Final Report



prepared by

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in cooperation with

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1. Overview

1.1 Introduction

Effective solid waste management planning begins with knowing what is in the waste stream—how much of which types of material is disposed by each generator type. This basic information is essential to all aspects of policy and program implementation. Thus, Seattle Public Utilities (formerly the Seattle Solid Waste Utility) launched an ongoing waste composition study in 1988. Objectives for the project include:

- obtaining information for characterizing the total waste stream;
- establishing a baseline for continued long-term measurement of system performance;
- obtaining specific data about various waste substreams to enable the City to estimate the recycling potential within each;
- understanding the differences between substreams so that targeted recycling programs can be designed, implemented, and monitored;
- determining waste generation factors for various residential and commercial substreams, thereby enabling the City to forecast future composition; and
- creating a database for ongoing evaluation and analysis of waste composition sampling data.

The number of samples taken throughout the project’s history is listed in Table 1-1.

Table 1-1 Samples per Study Period, by Substream

Year	Number of Samples			Overall
	Commercial	Residential	Self-Haul	
1988-89	121	212	217	550
1990	0	114	203	317
1992	251	0	197	448
1994-95	0	368	0	368
1996	348	0	199	547
Study to date	720	694	816	2,230

This report provides waste composition estimates for Seattle’s 1996 commercial and self-haul waste streams, based on twelve months of sampling. Cascadia Consulting Group served as the prime contractor for this research, Sky Valley Associates performed the fieldwork, E. Ashley Steel provided statistical advice and Hopkins Environmental performed the data entry.

The report is organized into three segments: Section 1 briefly summarizes the project. Complete results of the commercial sampling are described in Section 2 while the self-haul results are examined in Section 3. Detailed appendices follow the main body of the report.

1.2 Source of Disposed Waste

For a full account of the project's methodology, please see Appendix C.

It should be noted that this study measures waste disposal, not generation. (Waste generation equals the sum of disposed and recycled amounts.) The samples were taken from loads destined for the landfill and do not include tonnage collected through recycling or yard waste composting programs. This study targets two main substreams:

- The **commercial** substream is comprised of wastes a) generated at businesses and institutions, and b) collected by contracted hauling companies. Commercial wastes generated within Seattle may be hauled to the City-owned transfer stations (North and South Recycling and Disposal Stations—NRDS and SRDS) or three private facilities, one of which is a dedicated construction, demolition and landclearing waste (CDL) site.
- The **self-haul** substream is comprised of wastes a) generated at residences as well as businesses and institutions, and b) hauled by the household or business that generated the waste. All self-haul wastes included in this study were disposed at either the NRDS or SRDS.

Most CDL waste generated in Seattle is disposed separately from the municipal solid waste (MSW). Since this study measures the composition of MSW only, pure CDL loads were excluded. Therefore, no samples were taken from Black River (a dedicated CDL site) and none of the CDL-only loads delivered to the Rabanco transfer facility were included. Occasionally, however, CDL-only loads are disposed in the MSW stream. Using the pre-established sampling schedule, five of the selected commercial vehicles and 27 of the self-haul vehicles were actually carrying pure CDL wastes. Wastes from these vehicles were included in the sampling.¹

1.3 Summary of 1996 Sampling Results

The 1996 phase of Seattle's waste study focused on the commercial and self-haul substreams. Composition results are illustrated in Figure 1-1.² As shown, paper and organics account for more

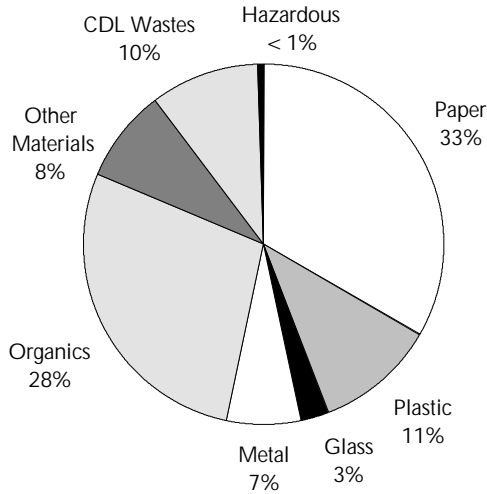
¹ Three commercial samples from 3/29/96 (night shift), one from 4/26/96 (day shift) and one from 12/16/96 (day shift) were actually CDL-only loads. Of the 27 CDL-only self-haul loads sampled, 13 were sorted at NRDS and the remaining 14 at SRDS. For more detail regarding Seattle's CDL waste stream, please see the *Construction, Demolition and Landclearing Debris Study Final Report* prepared for Seattle Public Utilities by Cunningham Environmental Consulting and Cascadia Consulting Group (1997).

² All waste composition results were derived using a 90% confidence level. This means there is a 90% certainty that the actual composition is within the calculated range. In charts throughout this report, the values graphed represent the mean component percentage, not the range.

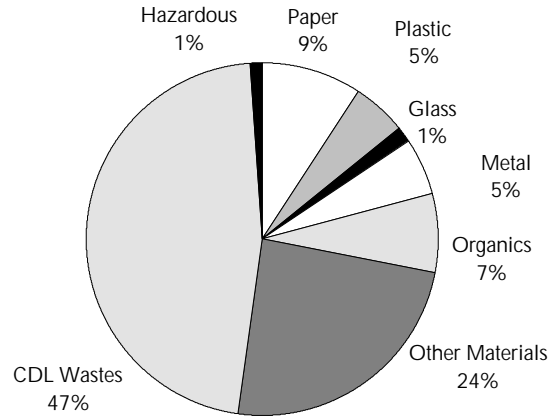
than 60% of the commercial substream, while CDL wastes and the miscellaneous “other materials” categories comprise nearly three-quarters of the self-haul substream.³

Figure 1-1 Overview of Composition Estimates, by Substream
January - December 1996

Overall Commercial



Overall Self-Haul



1.3.1 Commercial Stream

On a more detailed level, Table 1-2 lists the composition percentages, by weight, of each material in the commercial substream. The following four components account for approximately 46% of the commercial tonnage:

- Food 22.2% Mean estimate of 1996 tons: 42,933
- Mixed Low Grade Paper 9.8% Mean estimate of 1996 tons: 19,055
- Compostable/Soiled Paper 7.0% Mean estimate of 1996 tons: 13,525
- Cardboard/Kraft Paper, Unwaxed 6.7% Mean estimate of 1996 tons: 12,945

³ “CDL” (construction, demolition and landclearing) debris includes lumber, soil and gypsum. “Other Materials” includes textiles, carpet/upholstery and rubber. Please refer to Table 1-2 for the complete listing.

Table 1-2 Composition by Weight: Overall Commercial
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	64,488	33.3%			Organics	54,389	28.1%		
Newspaper	5,175	2.7%	2.5%	2.8%	Pallets	4,397	2.3%	2.0%	2.5%
OCC/Kraft, unwaxed	12,945	6.7%	6.4%	6.9%	Crates/Boxes	1,892	1.0%	0.9%	1.1%
OCC/Kraft, waxed	3,481	1.8%	1.6%	2.0%	Leaves and Grass	4,145	2.1%	1.9%	2.4%
Office Paper	3,135	1.6%	1.5%	1.7%	Prunings	1,022	0.5%	0.4%	0.7%
Computer Paper	866	0.4%	0.4%	0.5%	Food	42,933	22.2%	21.3%	23.0%
Mixed Low Grade	19,055	9.8%	9.5%	10.2%	Other Materials	15,939	8.2%		
Phone Books	533	0.3%	0.2%	0.3%	Textiles/Clothing	2,989	1.5%	1.4%	1.7%
Milk/Juice Polycoats	839	0.4%	0.4%	0.5%	Carpet/Upholstery	2,726	1.4%	1.2%	1.6%
Frozen Food Polycoats	269	0.1%	0.1%	0.2%	Leather	148	0.1%	0.1%	0.1%
Compostable/Soiled	13,525	7.0%	6.7%	7.2%	Disposable Diapers	646	0.3%	0.3%	0.4%
Paper/Other Materials	3,382	1.7%	1.6%	1.9%	Animal By-Products	587	0.3%	0.3%	0.3%
Other Paper	1,284	0.7%	0.6%	0.7%	Rubber Products	1,534	0.8%	0.7%	0.9%
Plastic	21,357	11.0%			Tires	153	0.1%	0.1%	0.1%
PET Pop & Liquor	298	0.2%	0.1%	0.2%	Ash	83	0.0%	0.0%	0.1%
Other PET Bottles	155	0.1%	0.1%	0.1%	Furniture	840	0.4%	0.4%	0.5%
HDPE Milk & Juice	337	0.2%	0.2%	0.2%	Mattresses	337	0.2%	0.1%	0.2%
Other HDPE Bottles	472	0.2%	0.2%	0.3%	Small Appliances	953	0.5%	0.4%	0.6%
Other Plastic Bottles	115	0.1%	0.1%	0.1%	A/V Equipment	454	0.2%	0.2%	0.3%
Jars & Tubs	547	0.3%	0.3%	0.3%	Ceramics/Porcelain	611	0.3%	0.3%	0.4%
Expanded Polystyrene	911	0.5%	0.4%	0.5%	Non-distinct Fines	1,322	0.7%	0.6%	0.7%
Other Rigid Packaging	1,004	0.5%	0.5%	0.5%	Misc. Organics	1,743	0.9%	0.8%	1.0%
Grocery/Bread Bags	884	0.5%	0.4%	0.5%	Misc. Inorganics	813	0.4%	0.4%	0.5%
Garbage Bags	2,874	1.5%	1.4%	1.5%	CDL Wastes	19,184	9.9%		
Other Film	8,218	4.2%	4.1%	4.4%	Dimension Lumber	3,226	1.7%	1.5%	1.8%
Plastic Products	2,616	1.3%	1.2%	1.5%	Other Untreated Wood	731	0.4%	0.3%	0.4%
Plastic/Other Materials	2,926	1.5%	1.4%	1.7%	Treated Wood	2,819	1.5%	1.3%	1.6%
Glass	4,815	2.5%			Contaminated Wood	1,901	1.0%	0.8%	1.1%
Clear Beverage	2,062	1.1%	1.0%	1.1%	New Gypsum Scrap	220	0.1%	0.1%	0.1%
Green Beverage	788	0.4%	0.4%	0.4%	Demo Gypsum Scrap	3,002	1.5%	1.3%	1.8%
Brown Beverage	831	0.4%	0.4%	0.5%	Fiberglass Insulation	197	0.1%	0.1%	0.1%
Container Glass	234	0.1%	0.1%	0.1%	Rock/Concrete/Brick	1,383	0.7%	0.6%	0.8%
Fluorescent Tubes	47	0.0%	0.0%	0.0%	Asphaltic Roofing	858	0.4%	0.3%	0.6%
Other Glass	854	0.4%	0.4%	0.5%	Other Construction Debris	1,390	0.7%	0.6%	0.8%
Metal	12,672	6.5%			Sand/Soil/Dirt	3,458	1.8%	1.6%	2.0%
Aluminum Cans	616	0.3%	0.3%	0.3%	Hazardous	949	0.5%		
Alum. Foil/Containers	118	0.1%	0.1%	0.1%	Latex Paints	204	0.1%	0.1%	0.1%
Other Aluminum	240	0.1%	0.1%	0.1%	Hazardous Adhesives/Glues	33	0.0%	0.0%	0.0%
Other Nonferrous	572	0.3%	0.2%	0.3%	NonHazardous Adhesives/Glues	19	0.0%	0.0%	0.0%
Tin Food Cans	1,332	0.7%	0.6%	0.7%	Oil-based Paints/Solvents	51	0.0%	0.0%	0.0%
Empty Aerosol Cans	128	0.1%	0.1%	0.1%	Cleaners	11	0.0%	0.0%	0.0%
Other Ferrous	5,929	3.1%	2.8%	3.3%	Pesticides/Herbicides	0	0.0%	0.0%	0.0%
Mixed Metals/Materials	3,737	1.9%	1.8%	2.1%	Dry-Cell Batteries	96	0.0%	0.0%	0.1%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	7	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	11	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	0	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	394	0.2%	0.2%	0.2%
Total Tons	193,793				Other NonHazardous Chemicals	124	0.1%	0.0%	0.1%
Sample Count	348								

Composition estimates for the commercial waste stream were calculated in four ways:

- overall commercial
- by season
- by vehicle type
- by generator type

The largest components (each accounting for more than 5% of the total tonnage) for each sector are shown in Table 1-3. Food, mixed low grade paper, compostable/soiled paper and unwaxed cardboard/Kraft are particularly prevalent. When the data are stratified, (according to generator type, etc.) the sample size for each analysis is smaller—which means that the calculations are subject to a more substantial range of error. Refer to Section 2 for more detail regarding the commercial substream.

Table 1-3 Largest Waste Components, by Commercial Substream Sector
January - December 1996

	Overall	Season				Vehicle		Generator Type											
		Spring	Summer	Fall	Winter	Packer	Roll-Off	CDL	Education	Health Care	Hotel/Motel	Mfg	Office	Other Services	Restaurant	Retail	Transportation	Wholesale	Mixed
Paper																			
Newspaper									5.0%		11.0%								
OCC/Kraft, unwaxed	6.7%	5.3%	7.4%	7.6%	7.0%	6.5%	7.1%					9.3%		8.8%	10.9%	8.3%	6.9%	6.6%	
OCC/Kraft, waxed															5.7%		13.0%		
Office Paper													6.8%						
Mixed Low Grade	9.8%	10.5%	10.8%	8.6%	10.7%	9.6%	10.6%		10.5%	12.4%	9.2%	5.5%	18.6%	20.9%	6.3%	6.0%		11.3%	9.3%
Compostable/Soiled Paper/Other Materials	7.0%	7.8%	5.8%	6.3%	8.1%	7.0%	7.0%		17.3%	22.5%	10.2%		9.4%	6.9%		6.1%	5.8%		7.0%
												8.2%							
Plastic																			
Garbage Bags													5.0%						
Other Film			5.5%	5.7%			6.4%						7.3%	7.0%		13.2%	5.9%		15.1%
Metal																			
Other Ferrous									5.4%										6.3%
Organics																			
Pallets														5.2%			11.2%	6.8%	
Crates/Boxes																	10.8%		
Food	22.2%	20.5%	19.7%	25.0%	18.1%	24.2%	18.2%		23.0%	10.9%	42.7%	6.6%	8.2%	9.9%	50.8%	34.1%	5.9%	19.2%	24.6%
Other Materials																			
Textiles/Clothing													5.4%						
Carpet/Upholstery									5.7%										
Dimension Lumber									6.5%			5.9%							
Treated Wood																	7.7%		
Contaminated Wood																	5.3%		
New Gypsum Scrap									7.8%										
Demo Gypsum Scrap									36.6%										
Rock/Concrete/Brick									8.2%										
Sand/Soil/Dirt									8.3%								9.4%		
Other Hazardous Chemicals										8.2%									
Number of Samples	348	89	85	90	84	161	187	5	15	9	5	25	19	28	5	34	10	29	151

1.3.2 Self-Haul Stream

Table 1-4 lists the composition percentages, by weight, of each material in the self-haul substream. As shown, the four most prevalent materials disposed include:

• Dimension Lumber	10.6%	Mean estimate of 1996 tons: 8,920
• Treated Wood	9.9%	Mean estimate of 1996 tons: 8,258
• Furniture	8.0%	Mean estimate of 1996 tons: 6,706
• Asphaltic Roofing	5.0%	Mean estimate of 1996 tons: 4,223

Table 1-4 Composition by Weight: Overall Self-Haul
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	7,629	9.1%			Organics	5,854	7.0%		
Newspaper	433	0.5%	0.4%	0.6%	Pallets	773	0.9%	0.6%	1.3%
OCC/Kraft, unwaxed	2,584	3.1%	2.7%	3.4%	Crates/Boxes	111	0.1%	0.1%	0.2%
OCC/Kraft, waxed	42	0.0%	0.0%	0.1%	Leaves and Grass	2,816	3.4%	2.6%	4.1%
Office Paper	235	0.3%	0.2%	0.3%	Prunings	795	0.9%	0.6%	1.3%
Computer Paper	2	0.0%	0.0%	0.0%	Food	1,359	1.6%	1.3%	1.9%
Mixed Low Grade	2,768	3.3%	2.8%	3.8%	Other Materials	20,404	24.3%		
Phone Books	136	0.2%	0.1%	0.2%	Textiles/Clothing	1,535	1.8%	1.5%	2.1%
Milk/Juice Polycoats	19	0.0%	0.0%	0.0%	Carpet/Upholstery	4,132	4.9%	4.1%	5.8%
Frozen Food Polycoats	3	0.0%	0.0%	0.0%	Leather	225	0.3%	0.2%	0.3%
Compostable/Soiled	260	0.3%	0.3%	0.4%	Disposable Diapers	105	0.1%	0.1%	0.2%
Paper/Other Materials	756	0.9%	0.6%	1.2%	Animal By-Products	73	0.1%	0.1%	0.1%
Other Paper	393	0.5%	0.2%	0.8%	Rubber Products	464	0.6%	0.5%	0.7%
Plastic	4,342	5.2%			Tires	161	0.2%	0.1%	0.3%
PET Pop & Liquor	24	0.0%	0.0%	0.0%	Ash	15	0.0%	0.0%	0.0%
Other PET Bottles	8	0.0%	0.0%	0.0%	Furniture	6,706	8.0%	6.7%	9.3%
HDPE Milk & Juice	14	0.0%	0.0%	0.0%	Mattresses	2,928	3.5%	2.6%	4.3%
Other HDPE Bottles	75	0.1%	0.1%	0.1%	Small Appliances	920	1.1%	0.8%	1.4%
Other Plastic Bottles	13	0.0%	0.0%	0.0%	A/V Equipment	1,130	1.3%	1.0%	1.7%
Jars & Tubs	25	0.0%	0.0%	0.0%	Ceramics/Porcelain	1,061	1.3%	0.9%	1.6%
Expanded Polystyrene	92	0.1%	0.1%	0.1%	Non-distinct Fines	159	0.2%	0.1%	0.2%
Other Rigid Packaging	66	0.1%	0.1%	0.1%	Misc. Organics	620	0.7%	0.5%	1.0%
Grocery/Bread Bags	72	0.1%	0.1%	0.1%	Misc. Inorganics	168	0.2%	0.1%	0.3%
Garbage Bags	141	0.2%	0.1%	0.2%	CDL Wastes	39,029	46.6%		
Other Film	395	0.5%	0.4%	0.6%	Dimension Lumber	8,920	10.6%	8.8%	12.4%
Plastic Products	1,763	2.1%	1.7%	2.5%	Other Untreated Wood	3,004	3.6%	2.5%	4.7%
Plastic/Other Materials	1,655	2.0%	1.6%	2.3%	Treated Wood	8,258	9.9%	8.2%	11.5%
Glass	1,029	1.2%			Contaminated Wood	3,027	3.6%	2.6%	4.6%
Clear Beverage	213	0.3%	0.2%	0.3%	New Gypsum Scrap	2,074	2.5%	1.5%	3.5%
Green Beverage	81	0.1%	0.1%	0.1%	Demo Gypsum Scrap	2,084	2.5%	1.7%	3.2%
Brown Beverage	91	0.1%	0.1%	0.1%	Fiberglass Insulation	191	0.2%	0.2%	0.3%
Container Glass	121	0.1%	0.1%	0.2%	Rock/Concrete/Brick	3,526	4.2%	3.4%	5.0%
Fluorescent Tubes	12	0.0%	0.0%	0.0%	Asphaltic Roofing	4,223	5.0%	3.5%	6.6%
Other Glass	512	0.6%	0.4%	0.8%	Other Construction Debris	2,806	3.3%	2.4%	4.3%
Metal	4,520	5.4%			Sand/Soil/Dirt	915	1.1%	0.7%	1.5%
Aluminum Cans	54	0.1%	0.0%	0.1%	Hazardous	917	1.1%		
Alum. Foil/Containers	5	0.0%	0.0%	0.0%	Latex Paints	174	0.2%	0.2%	0.3%
Other Aluminum	165	0.2%	0.1%	0.3%	Hazardous Adhesives/Glues	59	0.1%	0.1%	0.1%
Other Nonferrous	185	0.2%	0.1%	0.3%	NonHazardous Adhesives/Glues	129	0.2%	0.1%	0.2%
Tin Food Cans	89	0.1%	0.1%	0.1%	Oil-based Paints/Solvents	76	0.1%	0.1%	0.1%
Empty Aerosol Cans	14	0.0%	0.0%	0.0%	Cleaners	15	0.0%	0.0%	0.0%
Other Ferrous	2,225	2.7%	2.1%	3.2%	Pesticides/Herbicides	57	0.1%	0.0%	0.1%
Mixed Metals/Materials	1,781	2.1%	1.7%	2.5%	Dry-Cell Batteries	21	0.0%	0.0%	0.0%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	3	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	14	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	2	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	81	0.1%	0.1%	0.1%
Total Tons	83,808				Other NonHazardous Chemicals	286	0.3%	0.2%	0.4%
Sample Count	199								

1.4 Comparison with Previous Studies

In this section, selected results of the 1992 study are compared to the 1996 findings.⁴ The purpose of this analysis is simply to highlight differences across the time period. The reasons *why* or *how* these changes occurred were not investigated.

Variations were measured within the following substreams:

- overall commercial
- self-haul trucks
- self-haul cars

Please see Appendix F for the list of waste components chosen for analysis. In Seattle's previous waste composition studies, year-to-year comparisons were made primarily by examining raw differences in tonnage. Section 1.3.1 presents the results of this type of analysis. In addition, the current study goes a step further by using statistics to more precisely measure variations across the study periods. Section 1.3.2 examines these results.

1.4.1 Disposed Tons

Overall, the amount of waste disposed in the commercial substream held steady from 1992 to 1996, while the total amount of waste self-hauled in trucks decreased about 7% and the amount self-hauled in cars increased 23%. The single largest increase appears in the commercial sector: the amount of disposed food waste climbed more than 16,700 tons from 1992 to 1996. Table 1-6 lists the details.

⁴ The 1992 study was also conducted by Cascadia Consulting Group, following the same basic methodology as the 1996 project. See Appendix C for more detail.

Table 1-6 Tonnage Disposed, by Substream, Year and Selected Materials

	Estimated Disposed Tons			
	1992	1996	Difference	
Commercial				
Unwaxed Cardboard & Kraft	20,095	12,945	-7,150	-22%
Office and Computer Paper	7,933	4,001	-3,932	-33%
Low Grade Paper	11,955	19,588	7,633	24%
Plastic	22,122	21,357	-765	-2%
Food Waste	26,152	42,933	16,781	24%
Untreated Wood	19,794	10,246	-9,548	-32%
Treated and Contaminated Wood	4,547	4,720	173	2%
Construction and Demolition	5,185	7,050	1,865	15%
Hazardous	550	949	399	27%
Substream Total	194,338	193,793	-545	0%
Self-Haul Truck				
Unwaxed Cardboard & Kraft	3,438	2,199	-1,239	-22%
Recyclable Metal	4,792	2,365	-2,427	-34%
Leaves, Grass and Prunings	3,484	3,005	-479	-7%
Carpet and Textiles	8,854	5,205	-3,649	-26%
Untreated Wood	12,980	10,846	-2,134	-9%
Treated and Contaminated Wood	11,090	8,981	-2,109	-11%
Construction and Demolition	12,579	12,463	-116	0%
Hazardous	759	602	-157	-12%
Substream Total	80,753	70,031	-10,722	-7%
Self-Haul Car				
Unwaxed Cardboard & Kraft	272	414	142	21%
Recyclable Metal	329	417	88	12%
Leaves, Grass and Prunings	216	966	750	63%
Carpet and Textiles	707	1,139	432	23%
Untreated Wood	1,764	1,430	-334	-10%
Treated and Contaminated Wood	1,232	1,382	150	6%
Construction and Demolition	1,699	2,464	765	18%
Hazardous	56	343	287	72%
Substream Total	8,555	13,777	5,222	23%

Although waste composition differences are often apparent across study periods, these variations are not always statistically significant, as discussed in the following section.

1.4.2 Waste Proportions

Selected results of the 1992 and 1996 waste composition studies were compared using t-tests, with a correction for the number of tests performed (thus reducing the risk of falsely identifying statistically significant differences). In order to control for population changes and other factors that may influence the total amount of waste disposed from year to year, statistical tests were applied to the waste proportions, not actual tonnage.⁵ Please see Appendix D for the calculation formulae.

⁵ For example, say that cardboard accounts for 5% of a particular substream's disposed waste each year, and that the substream disposed a total of 1,000 tons of waste in one year and 2,000 tons of waste in the next. While the amount of cardboard increased from 50 to 100 tons, the percentage remained the same. Therefore, the statistical tests would indicate that there had been no change.

Statistically significant changes for the commercial substream are shown in Table 1-7. Because the waste category percentages are dependent, it is possible that the decreases in the relative amount of unwaxed cardboard, office & computer paper and untreated wood might have forced the proportion of low grade paper and food waste to increase, when in reality there had been no significant rise. Therefore a second calculation, which ignored unwaxed cardboard, office & computer paper and untreated wood, was performed. The results of this test confirmed that the increases in low grade paper and food waste were statistically significant. (Please refer to Appendix F for the full details.)

**Table 1-7 Statistically Significant Changes in Commercial Composition
1992-1996**

	Mean Composition Estimate	
	1992	1996
Unwaxed Cardboard & Kraft	10.3%	6.8%
Office and Computer Paper	4.1%	2.1%
Untreated Wood	10.2%	5.6%
Low Grade Paper	6.2%	10.5%
Food Waste	13.5%	21.0%
<i>Number of Samples</i>	251	348

No statistically significant changes were identified in either the self-haul truck or the self-haul car substreams. It should be noted that self-haul wastes are markedly more variable than either the commercial or residential substream. Therefore, differences would have to be extreme, or the sample sizes particularly large, to identify statistically significant changes across years.

2. The Commercial Stream

2.1 Introduction

A total of 348 loads from the commercial substream was sampled from January to December, 1996. Table 2-1 summarizes the sample information for each commercial sector.

The drivers of sampled vehicles were asked to identify from which type of business they had collected the load. In cases where the driver could indicate that all of the load was from a single business type, that information was noted; otherwise, "mixed generator types" was recorded. There was no intent to capture a certain number of samples from any particular generator type. (Sample selection was based on vehicle class; please refer to Appendix C for more detail.) As shown in Table 2-1, many of the generator-specific analyses are based on a very small number of samples and are thus subject to a relatively wide margin of error. Generator-specific results are presented in order to provide rough estimates only.

Table 2-1 Number, Average Size and Sum of Samples, by Commercial Sector

	Sample Count	<i>(All weights in pounds)</i>		
		Total Sample	Average Sample	Average Net Load Weight
Spring	89	23,917.0	268.7	13,156.0
Summer	85	22,216.9	261.4	12,257.4
Fall	90	24,593.7	273.3	11,597.7
Winter	84	21,781.7	259.3	14,776.8
Packer	161	42,873.2	266.3	18,598.4
Roll-Off	187	49,372.2	264.0	8,039.9
CDL	5	1,513.1	302.6	11,132.0
Education	15	3,610.8	240.7	6,798.7
Health Care	9	2,089.7	232.2	9,095.6
Hotel/Motel	5	1,332.8	266.6	12,464.0
Manufacturing	25	6,748.3	269.9	7,222.4
Office	19	4,687.3	246.7	7,990.5
Other Services	28	7,277.5	259.9	7,106.7
Restaurant	5	1,815.1	363.0	11,416.0
Retail	34	9,120.3	268.2	9,676.5
Transportation	10	2,952.3	295.2	5,695.8
Wholesale	29	7,823.9	269.8	7,017.2
Mixed Generator Types	151	40,253.3	266.6	18,278.4
Overall	348	92,509.3	265.8	12,924.7

In the following sections, commercial waste composition results are described. Each material accounting for more than 5% of the substream's tonnage is listed in the text introducing the composition tables.

2.2 Overall Commercial Composition

Table 2-2 lists the composition percentages, by weight, of each material in the commercial substream. The following four components account for approximately 46% of the commercial tonnage:

• Food	22.2%	Mean estimate of 1996 tons:	42,933
• Mixed Low Grade Paper	9.8%	Mean estimate of 1996 tons:	19,055
• Compostable/Soiled Paper	7.0%	Mean estimate of 1996 tons:	13,525
• Cardboard/Kraft Paper, Unwaxed	6.7%	Mean estimate of 1996 tons:	12,945

Table 2-2 Composition by Weight: Overall Commercial
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	64,488	33.3%			Organics	54,389	28.1%		
Newspaper	5,175	2.7%	2.5%	2.8%	Pallets	4,397	2.3%	2.0%	2.5%
OCC/Kraft, unwaxed	12,945	6.7%	6.4%	6.9%	Crates/Boxes	1,892	1.0%	0.9%	1.1%
OCC/Kraft, waxed	3,481	1.8%	1.6%	2.0%	Leaves and Grass	4,145	2.1%	1.9%	2.4%
Office Paper	3,135	1.6%	1.5%	1.7%	Prunings	1,022	0.5%	0.4%	0.7%
Computer Paper	866	0.4%	0.4%	0.5%	Food	42,933	22.2%	21.3%	23.0%
Mixed Low Grade	19,055	9.8%	9.5%	10.2%	Other Materials	15,939	8.2%		
Phone Books	533	0.3%	0.2%	0.3%	Textiles/Clothing	2,989	1.5%	1.4%	1.7%
Milk/Juice Polycoats	839	0.4%	0.4%	0.5%	Carpet/Upholstery	2,726	1.4%	1.2%	1.6%
Frozen Food Polycoats	269	0.1%	0.1%	0.2%	Leather	148	0.1%	0.1%	0.1%
Compostable/Soiled	13,525	7.0%	6.7%	7.2%	Disposable Diapers	646	0.3%	0.3%	0.4%
Paper/Other Materials	3,382	1.7%	1.6%	1.9%	Animal By-Products	587	0.3%	0.3%	0.3%
Other Paper	1,284	0.7%	0.6%	0.7%	Rubber Products	1,534	0.8%	0.7%	0.9%
Plastic	21,357	11.0%			Tires	153	0.1%	0.1%	0.1%
PET Pop & Liquor	298	0.2%	0.1%	0.2%	Ash	83	0.0%	0.0%	0.1%
Other PET Bottles	155	0.1%	0.1%	0.1%	Furniture	840	0.4%	0.4%	0.5%
HDPE Milk & Juice	337	0.2%	0.2%	0.2%	Mattresses	337	0.2%	0.1%	0.2%
Other HDPE Bottles	472	0.2%	0.2%	0.3%	Small Appliances	953	0.5%	0.4%	0.6%
Other Plastic Bottles	115	0.1%	0.1%	0.1%	A/V Equipment	454	0.2%	0.2%	0.3%
Jars & Tubs	547	0.3%	0.3%	0.3%	Ceramics/Porcelain	611	0.3%	0.3%	0.4%
Expanded Polystyrene	911	0.5%	0.4%	0.5%	Non-distinct Fines	1,322	0.7%	0.6%	0.7%
Other Rigid Packaging	1,004	0.5%	0.5%	0.5%	Misc. Organics	1,743	0.9%	0.8%	1.0%
Grocery/Bread Bags	884	0.5%	0.4%	0.5%	Misc. Inorganics	813	0.4%	0.4%	0.5%
Garbage Bags	2,874	1.5%	1.4%	1.5%	CDL Wastes	19,184	9.9%		
Other Film	8,218	4.2%	4.1%	4.4%	Dimension Lumber	3,226	1.7%	1.5%	1.8%
Plastic Products	2,616	1.3%	1.2%	1.5%	Other Untreated Wood	731	0.4%	0.3%	0.4%
Plastic/Other Materials	2,926	1.5%	1.4%	1.7%	Treated Wood	2,819	1.5%	1.3%	1.6%
Glass	4,815	2.5%			Contaminated Wood	1,901	1.0%	0.8%	1.1%
Clear Beverage	2,062	1.1%	1.0%	1.1%	New Gypsum Scrap	220	0.1%	0.1%	0.1%
Green Beverage	788	0.4%	0.4%	0.4%	Demo Gypsum Scrap	3,002	1.5%	1.3%	1.8%
Brown Beverage	831	0.4%	0.4%	0.5%	Fiberglass Insulation	197	0.1%	0.1%	0.1%
Container Glass	234	0.1%	0.1%	0.1%	Rock/Concrete/Brick	1,383	0.7%	0.6%	0.8%
Fluorescent Tubes	47	0.0%	0.0%	0.0%	Asphaltic Roofing	858	0.4%	0.3%	0.6%
Other Glass	854	0.4%	0.4%	0.5%	Other Construction Debris	1,390	0.7%	0.6%	0.8%
Metal	12,672	6.5%			Sand/Soil/Dirt	3,458	1.8%	1.6%	2.0%
Aluminum Cans	616	0.3%	0.3%	0.3%	Hazardous	949	0.5%		
Alum. Foil/Containers	118	0.1%	0.1%	0.1%	Latex Paints	204	0.1%	0.1%	0.1%
Other Aluminum	240	0.1%	0.1%	0.1%	Hazardous Adhesives/Glues	33	0.0%	0.0%	0.0%
Other Nonferrous	572	0.3%	0.2%	0.3%	Non-Hazardous Adhesives/Glues	19	0.0%	0.0%	0.0%
Tin Food Cans	1,332	0.7%	0.6%	0.7%	Oil-based Paints/Solvents	51	0.0%	0.0%	0.0%
Empty Aerosol Cans	128	0.1%	0.1%	0.1%	Cleaners	11	0.0%	0.0%	0.0%
Other Ferrous	5,929	3.1%	2.8%	3.3%	Pesticides/Herbicides	0	0.0%	0.0%	0.0%
Mixed Metals/Materials	3,737	1.9%	1.8%	2.1%	Dry-Cell Batteries	96	0.0%	0.0%	0.1%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	7	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	11	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	0	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	394	0.2%	0.2%	0.2%
Total Tons	193,793				Other NonHazardous Chemicals	124	0.1%	0.0%	0.1%
Sample Count	348								

2.3 Composition by Season

On a broad waste category level, the commercial composition results are quite similar across seasons. A summary is shown in Figure 2-1; each season's results are examined in more detail in the following four sections.

2.3.1 Spring

During the spring (March - May, 1996), 89 commercial loads were sampled. As shown in Table 2-3, four materials account for a combined total of 44% of the tonnage.

- Food 20.5%
- Mixed Low Grade Paper 10.5%
- Compostable/Soiled Paper 7.8%
- OCC/Kraft, Unwaxed 5.3%

2.3.2 Summer

During the summer (June - August, 1996), 85 commercial loads were sampled. As shown in Table 2-4, five materials account for a combined total of 49% of the tonnage.

- Food 19.7%
- Mixed Low Grade Paper 10.8%
- Cardboard/Kraft, Unwaxed 7.4%
- Compostable/Soiled Paper 5.8%
- Other Film Plastic 5.5%

2.3.3 Fall

During the fall (September - November, 1996), 90 commercial loads were sampled. As shown in Table 2-5, five materials account for a combined total of 53% of the tonnage.

- Food 25.0%
- Mixed Low Grade Paper 8.6%
- Cardboard/Kraft, Unwaxed 7.6%
- Compostable/Soiled Paper 6.3%
- Other Film Plastic 5.7%

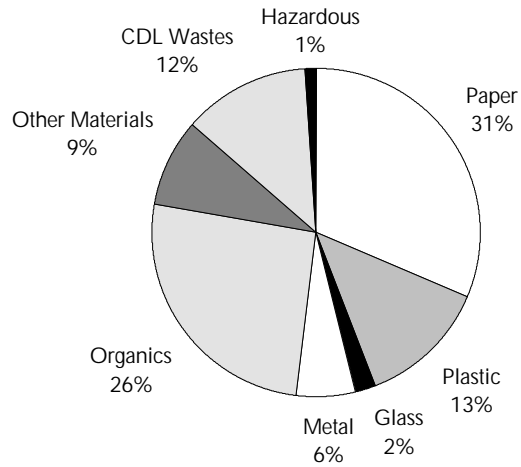
2.3.4 Winter

During the winter (January, February and December, 1996), 84 commercial loads were sampled. As shown Table 2-6, four materials account for a combined total of 44% of the tonnage.

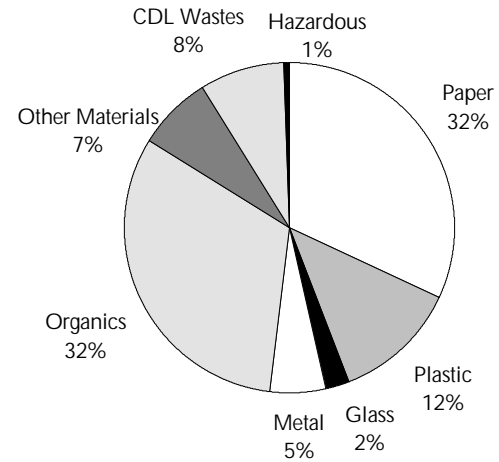
- Food 18.1%
- Mixed Low Grade Paper 10.7%
- Compostable/Soiled Paper 8.1%
- Cardboard/Kraft, Unwaxed 7.0%

Figure 2-1 Overview of Commercial Composition Estimates, by Season

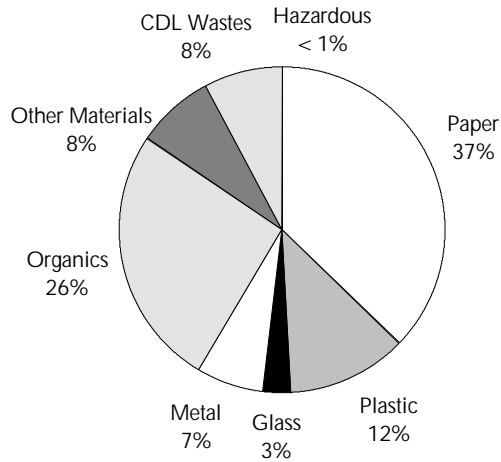
Spring



Fall



Summer



Winter

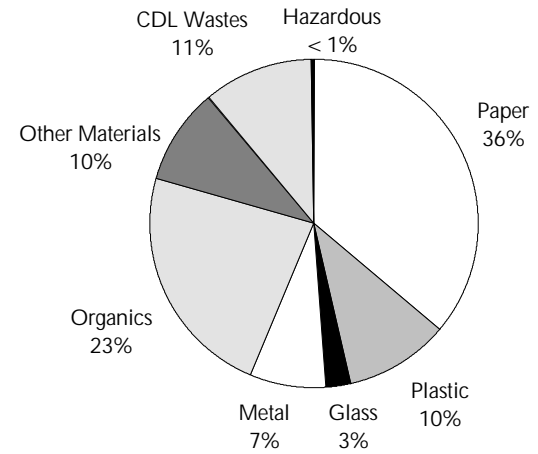


Table 2-3 Composition by Weight: Commercial in Spring
March - May 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	31.4%			Organics	26.0%		
Newspaper	2.1%	1.6%	2.6%	Pallets	1.0%	0.4%	1.6%
OCC/Kraft, unwaxed	5.3%	4.3%	6.3%	Crates/Boxes	2.2%	0.7%	3.8%
OCC/Kraft, waxed	0.7%	0.3%	1.2%	Leaves and Grass	2.2%	1.0%	3.4%
Office Paper	1.6%	1.1%	2.2%	Prunings	0.1%	0.0%	0.2%
Computer Paper	0.3%	0.1%	0.4%	Food	20.5%	16.1%	24.8%
Mixed Low Grade	10.5%	8.1%	12.9%	Other Materials	8.7%		
Phone Books	0.2%	0.0%	0.3%	Textiles/Clothing	3.0%	1.0%	5.0%
Milk/Juice Polycoats	0.8%	0.0%	1.8%	Carpet/Upholstery	1.4%	0.6%	2.2%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.1%	0.0%	0.1%
Compostable/Soiled	7.8%	6.3%	9.3%	Disposable Diapers	0.3%	0.1%	0.4%
Paper/Other Materials	2.0%	0.9%	3.1%	Animal By-Products	0.3%	0.1%	0.5%
Other Paper	0.1%	0.0%	0.3%	Rubber Products	0.4%	0.2%	0.5%
Plastic	12.6%			Tires	0.0%	0.0%	0.1%
PET Pop & Liquor	0.2%	0.1%	0.2%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.1%	Furniture	1.0%	0.0%	2.1%
HDPE Milk & Juice	0.2%	0.1%	0.3%	Mattresses	0.0%	0.0%	0.1%
Other HDPE Bottles	0.2%	0.1%	0.4%	Small Appliances	0.3%	0.1%	0.5%
Other Plastic Bottles	0.0%	0.0%	0.1%	A/V Equipment	0.1%	0.0%	0.2%
Jars & Tubs	0.3%	0.2%	0.5%	Ceramics/Porcelain	0.3%	0.0%	0.7%
Expanded Polystyrene	0.3%	0.2%	0.4%	Non-distinct Fines	0.9%	0.6%	1.2%
Other Rigid Packaging	0.4%	0.3%	0.5%	Misc. Organics	0.5%	0.0%	1.0%
Grocery/Bread Bags	0.2%	0.1%	0.3%	Misc. Inorganics	0.1%	0.0%	0.2%
Garbage Bags	1.5%	1.0%	1.9%	CDL Wastes	12.4%		
Other Film	4.4%	3.2%	5.5%	Dimension Lumber	1.8%	0.8%	2.9%
Plastic Products	2.0%	1.3%	2.8%	Other Untreated Wood	0.0%	0.0%	0.1%
Plastic/Other Materials	2.8%	0.3%	5.3%	Treated Wood	0.6%	0.3%	1.0%
Glass	2.1%			Contaminated Wood	1.0%	0.2%	1.8%
Clear Beverage	1.2%	0.7%	1.7%	New Gypsum Scrap	0.5%	0.0%	1.4%
Green Beverage	0.2%	0.1%	0.3%	Demo Gypsum Scrap	2.6%	0.4%	4.8%
Brown Beverage	0.4%	0.2%	0.5%	Fiberglass Insulation	0.1%	0.0%	0.2%
Container Glass	0.0%	0.0%	0.1%	Rock/Concrete/Brick	1.8%	0.4%	3.2%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	0.6%	0.0%	1.4%
Other Glass	0.2%	0.0%	0.3%	Other Construction Debris	0.8%	0.3%	1.3%
Metal	5.7%			Sand/Soil/Dirt	2.5%	0.8%	4.1%
Aluminum Cans	0.3%	0.2%	0.3%	Hazardous	1.1%		
Alum. Foil/Containers	0.0%	0.0%	0.1%	Latex Paints	0.2%	0.0%	0.5%
Other Aluminum	0.2%	0.0%	0.3%	Hazardous Adhesives/Glues	0.0%	0.0%	0.1%
Other Nonferrous	0.0%	0.0%	0.1%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.9%	0.5%	1.4%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.4%	1.3%	3.4%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.8%	0.9%	2.6%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.7%	0.1%	1.3%
Sample Count	89			Other NonHazardous Chemicals	0.2%	0.0%	0.4%

Table 2-4 Composition by Weight: Commercial in Summer

June - August 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	37.1%			Organics	25.9%		
Newspaper	2.3%	1.5%	3.1%	Pallets	2.9%	0.4%	5.4%
OCC/Kraft, unwaxed	7.4%	5.7%	9.0%	Crates/Boxes	0.9%	0.2%	1.6%
OCC/Kraft, waxed	4.4%	1.4%	7.4%	Leaves and Grass	1.4%	0.5%	2.2%
Office Paper	1.9%	1.1%	2.7%	Prunings	1.0%	0.0%	2.3%
Computer Paper	0.2%	0.1%	0.4%	Food	19.7%	15.9%	23.6%
Mixed Low Grade	10.8%	7.9%	13.6%	Other Materials	7.6%		
Phone Books	0.1%	0.0%	0.2%	Textiles/Clothing	1.0%	0.6%	1.5%
Milk/Juice Polycoats	0.4%	0.0%	0.9%	Carpet/Upholstery	1.5%	0.6%	2.3%
Frozen Food Polycoats	0.5%	0.0%	1.1%	Leather	0.2%	0.0%	0.5%
Compostable/Soiled	5.8%	4.6%	7.1%	Disposable Diapers	0.1%	0.0%	0.2%
Paper/Other Materials	2.2%	1.3%	3.1%	Animal By-Products	0.3%	0.1%	0.5%
Other Paper	1.1%	0.4%	1.7%	Rubber Products	0.4%	0.2%	0.7%
Plastic	12.1%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.1%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.1%	0.1%	Furniture	0.7%	0.0%	1.5%
HDPE Milk & Juice	0.2%	0.1%	0.2%	Mattresses	0.1%	0.0%	0.2%
Other HDPE Bottles	0.2%	0.1%	0.3%	Small Appliances	0.7%	0.2%	1.2%
Other Plastic Bottles	0.1%	0.0%	0.1%	A/V Equipment	0.4%	0.0%	0.9%
Jars & Tubs	0.5%	0.0%	1.0%	Ceramics/Porcelain	0.5%	0.0%	1.0%
Expanded Polystyrene	0.5%	0.3%	0.8%	Non-distinct Fines	0.7%	0.4%	0.9%
Other Rigid Packaging	0.7%	0.3%	1.2%	Misc. Organics	0.7%	0.3%	1.2%
Grocery/Bread Bags	0.2%	0.1%	0.3%	Misc. Inorganics	0.3%	0.0%	0.5%
Garbage Bags	1.5%	1.1%	1.8%	CDL Wastes	7.8%		
Other Film	5.5%	3.7%	7.4%	Dimension Lumber	1.7%	0.9%	2.5%
Plastic Products	1.1%	0.7%	1.5%	Other Untreated Wood	0.0%	0.0%	0.1%
Plastic/Other Materials	1.4%	0.9%	1.9%	Treated Wood	1.3%	0.5%	2.2%
Glass	2.6%			Contaminated Wood	0.5%	0.1%	1.0%
Clear Beverage	1.0%	0.7%	1.2%	New Gypsum Scrap	0.0%	0.0%	0.1%
Green Beverage	0.3%	0.2%	0.5%	Demo Gypsum Scrap	2.2%	0.2%	4.2%
Brown Beverage	0.3%	0.1%	0.4%	Fiberglass Insulation	0.1%	0.0%	0.2%
Container Glass	0.1%	0.0%	0.2%	Rock/Concrete/Brick	0.3%	0.0%	0.6%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	0.0%	0.0%	0.1%
Other Glass	0.9%	0.2%	1.6%	Other Construction Debris	0.6%	0.0%	1.3%
Metal	6.7%			Sand/Soil/Dirt	0.9%	0.3%	1.5%
Aluminum Cans	0.4%	0.3%	0.5%	Hazardous	0.1%		
Alum. Foil/Containers	0.1%	0.0%	0.1%	Latex Paints	0.0%	0.0%	0.1%
Other Aluminum	0.0%	0.0%	0.1%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.4%	0.1%	0.7%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.5%	0.4%	0.7%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	4.0%	2.3%	5.7%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.3%	0.8%	1.8%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	85			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-5 Composition by Weight: Commercial in Fall
September - November 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	32.0%			Organics	32.1%		
Newspaper	2.9%	2.0%	3.7%	Pallets	3.4%	1.6%	5.2%
OCC/Kraft, unwaxed	7.6%	6.1%	9.0%	Crates/Boxes	0.8%	0.1%	1.6%
OCC/Kraft, waxed	2.8%	1.3%	4.2%	Leaves and Grass	2.5%	1.3%	3.6%
Office Paper	1.2%	0.7%	1.7%	Prunings	0.4%	0.0%	1.0%
Computer Paper	0.4%	0.2%	0.7%	Food	25.0%	21.2%	28.9%
Mixed Low Grade	8.6%	7.2%	10.0%	Other Materials	7.0%		
Phone Books	0.1%	0.0%	0.2%	Textiles/Clothing	0.7%	0.5%	0.9%
Milk/Juice Polycoats	0.3%	0.2%	0.4%	Carpet/Upholstery	1.1%	0.2%	1.9%
Frozen Food Polycoats	0.1%	0.0%	0.1%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	6.3%	4.9%	7.6%	Disposable Diapers	0.4%	0.2%	0.6%
Paper/Other Materials	1.0%	0.1%	1.8%	Animal By-Products	0.1%	0.0%	0.3%
Other Paper	0.8%	0.3%	1.2%	Rubber Products	1.3%	0.0%	2.5%
Plastic	12.3%			Tires	0.1%	0.0%	0.2%
PET Pop & Liquor	0.1%	0.1%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.2%	Furniture	0.2%	0.0%	0.3%
HDPE Milk & Juice	0.2%	0.1%	0.2%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.2%	0.1%	0.2%	Small Appliances	0.4%	0.0%	1.0%
Other Plastic Bottles	0.0%	0.0%	0.1%	A/V Equipment	0.1%	0.0%	0.4%
Jars & Tubs	0.1%	0.1%	0.2%	Ceramics/Porcelain	0.2%	0.0%	0.3%
Expanded Polystyrene	0.6%	0.4%	0.8%	Non-distinct Fines	0.3%	0.2%	0.5%
Other Rigid Packaging	0.5%	0.3%	0.7%	Misc. Organics	1.2%	0.2%	2.1%
Grocery/Bread Bags	0.6%	0.3%	0.8%	Misc. Inorganics	0.9%	0.0%	1.9%
Garbage Bags	1.6%	1.2%	2.0%	CDL Wastes	8.4%		
Other Film	5.7%	3.9%	7.5%	Dimension Lumber	1.6%	0.5%	2.7%
Plastic Products	1.4%	0.6%	2.2%	Other Untreated Wood	0.1%	0.0%	0.2%
Plastic/Other Materials	1.1%	0.4%	1.8%	Treated Wood	1.3%	0.6%	2.0%
Glass	2.3%			Contaminated Wood	1.1%	0.0%	2.4%
Clear Beverage	0.9%	0.7%	1.1%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.4%	0.3%	0.6%	Demo Gypsum Scrap	0.6%	0.1%	1.0%
Brown Beverage	0.4%	0.3%	0.6%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.1%	0.0%	0.2%	Rock/Concrete/Brick	0.3%	0.0%	0.5%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.5%	0.0%	1.1%
Other Glass	0.4%	0.0%	0.9%	Other Construction Debris	0.5%	0.0%	1.0%
Metal	5.4%			Sand/Soil/Dirt	2.5%	0.0%	5.0%
Aluminum Cans	0.3%	0.2%	0.3%	Hazardous	0.6%		
Alum. Foil/Containers	0.1%	0.0%	0.1%	Latex Paints	0.1%	0.0%	0.2%
Other Aluminum	0.1%	0.1%	0.2%	Hazardous Adhesives/Glues	0.0%	0.0%	0.1%
Other Nonferrous	0.2%	0.0%	0.4%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.6%	0.4%	0.9%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.0%	0.9%	3.1%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	2.1%	0.9%	3.2%	Dry-Cell Batteries	0.1%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.3%	0.0%	0.9%
				Other NonHazardous Chemicals	0.0%	0.0%	0.1%
Sample Count	90						

**Table 2-6 Composition by Weight: Commercial in Winter
January, February and December 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	36.2%			Organics	23.2%		
Newspaper	3.0%	2.3%	3.7%	Pallets	2.9%	1.4%	4.4%
OCC/Kraft, unwaxed	7.0%	5.7%	8.2%	Crates/Boxes	0.2%	0.0%	0.3%
OCC/Kraft, waxed	0.8%	0.3%	1.4%	Leaves and Grass	1.8%	1.0%	2.7%
Office Paper	2.1%	1.5%	2.6%	Prunings	0.3%	0.0%	0.7%
Computer Paper	0.7%	0.3%	1.2%	Food	18.1%	14.7%	21.4%
Mixed Low Grade	10.7%	8.5%	12.9%	Other Materials	9.5%		
Phone Books	1.0%	0.0%	2.1%	Textiles/Clothing	1.9%	1.1%	2.8%
Milk/Juice Polycoats	0.4%	0.1%	0.6%	Carpet/Upholstery	1.3%	0.5%	2.0%
Frozen Food Polycoats	0.1%	0.0%	0.1%	Leather	0.1%	0.0%	0.1%
Compostable/Soiled	8.1%	6.9%	9.4%	Disposable Diapers	0.6%	0.2%	1.0%
Paper/Other Materials	1.6%	0.9%	2.3%	Animal By-Products	0.5%	0.2%	0.7%
Other Paper	0.8%	0.2%	1.4%	Rubber Products	0.6%	0.4%	0.8%
Plastic	10.1%			Tires	0.2%	0.0%	0.5%
PET Pop & Liquor	0.2%	0.2%	0.2%	Ash	0.1%	0.0%	0.3%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	0.5%	0.0%	1.0%
HDPE Milk & Juice	0.2%	0.1%	0.2%	Mattresses	0.6%	0.0%	1.3%
Other HDPE Bottles	0.3%	0.2%	0.4%	Small Appliances	0.7%	0.1%	1.3%
Other Plastic Bottles	0.1%	0.1%	0.1%	A/V Equipment	0.2%	0.0%	0.4%
Jars & Tubs	0.2%	0.1%	0.3%	Ceramics/Porcelain	0.2%	0.0%	0.4%
Expanded Polystyrene	0.6%	0.4%	0.7%	Non-distinct Fines	0.6%	0.3%	1.0%
Other Rigid Packaging	0.5%	0.4%	0.7%	Misc. Organics	0.7%	0.2%	1.2%
Grocery/Bread Bags	0.8%	0.6%	1.0%	Misc. Inorganics	0.7%	0.3%	1.2%
Garbage Bags	1.5%	1.2%	1.8%	CDL Wastes	10.8%		
Other Film	3.4%	2.4%	4.3%	Dimension Lumber	1.5%	0.5%	2.4%
Plastic Products	1.3%	0.8%	1.9%	Other Untreated Wood	1.2%	0.7%	1.8%
Plastic/Other Materials	0.9%	0.5%	1.4%	Treated Wood	3.1%	1.9%	4.3%
Glass	2.6%			Contaminated Wood	1.1%	0.1%	2.1%
Clear Beverage	1.1%	0.8%	1.3%	New Gypsum Scrap	0.0%	0.0%	0.1%
Green Beverage	0.5%	0.4%	0.7%	Demo Gypsum Scrap	0.3%	0.1%	0.5%
Brown Beverage	0.4%	0.3%	0.5%	Fiberglass Insulation	0.2%	0.0%	0.4%
Container Glass	0.1%	0.1%	0.1%	Rock/Concrete/Brick	0.5%	0.1%	0.9%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.4%	0.0%	1.0%
Other Glass	0.5%	0.0%	1.0%	Other Construction Debris	0.7%	0.1%	1.2%
Metal	7.4%			Sand/Soil/Dirt	1.8%	0.2%	3.4%
Aluminum Cans	0.3%	0.2%	0.4%	Hazardous	0.2%		
Alum. Foil/Containers	0.1%	0.1%	0.1%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.2%	0.0%	0.3%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.6%	0.1%	1.0%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.1%
Tin Food Cans	0.7%	0.5%	0.8%	Oil-based Paints/Solvents	0.0%	0.0%	0.1%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	3.2%	1.8%	4.7%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	2.4%	1.3%	3.4%	Dry-Cell Batteries	0.1%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.1%
				Other NonHazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	84						

2.4 Composition by Vehicle Type

Figure 2-2 displays the overall composition results, by weight, of the waste carried in packer trucks and roll-offs. The following sections examine each vehicle type in more detail.

2.4.1 Packer Trucks

A total of 161 front- and rear-loading commercial packer truck loads was sampled. As shown in Table 2-7, four materials account for a combined total of 47% of the tonnage.

- | | | |
|----------------------------|-------|------------------------------------|
| • Food | 24.2% | Mean estimate of 1996 tons: 29,650 |
| • Mixed Low Grade Paper | 9.6% | Mean estimate of 1996 tons: 11,828 |
| • Compostable/Soiled Paper | 7.0% | Mean estimate of 1996 tons: 8,613 |
| • Cardboard/Kraft, Unwaxed | 6.5% | Mean estimate of 1996 tons: 7,989 |

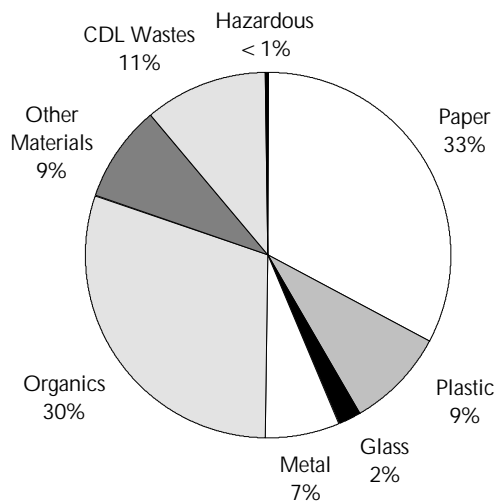
2.4.2 Roll-Offs

A total of 187 compact and loose commercial roll-off loads was sampled. As shown in Table 2-8, five materials account for a combined total of 49% of the tonnage.

- | | | |
|----------------------------|-------|------------------------------------|
| • Food | 18.2% | Mean estimate of 1996 tons: 12,990 |
| • Mixed Low Grade Paper | 10.6% | Mean estimate of 1996 tons: 7,522 |
| • Cardboard/Kraft, Unwaxed | 7.1% | Mean estimate of 1996 tons: 5,033 |
| • Compostable/Soiled Paper | 7.0% | Mean estimate of 1996 tons: 5,006 |
| • Other Film Plastic | 6.4% | Mean estimate of 1996 tons: 4,551 |

Figure 2-2 Overview of Commercial Composition Estimates, by Vehicle Type
January - December 1996

Packer Trucks



Roll-Offs

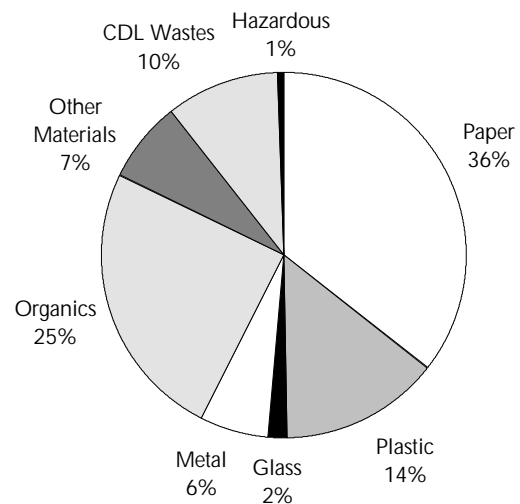


Table 2-7 Composition by Weight: Commercial Packer Trucks
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	40,010	32.6%			Organics	36,613	29.9%		
Newspaper	3,750	3.1%	2.6%	3.5%	Pallets	1,930	1.6%	0.8%	2.3%
OCC/Kraft, unwaxed	7,989	6.5%	5.6%	7.4%	Crates/Boxes	845	0.7%	0.3%	1.0%
OCC/Kraft, waxed	1,063	0.9%	0.4%	1.3%	Leaves and Grass	3,365	2.7%	1.8%	3.7%
Office Paper	1,857	1.5%	1.2%	1.8%	Prunings	822	0.7%	0.0%	1.4%
Computer Paper	642	0.5%	0.3%	0.8%	Food	29,650	24.2%	21.4%	27.0%
Mixed Low Grade	11,828	9.6%	8.6%	10.7%	Other Materials	10,774	8.8%		
Phone Books	384	0.3%	0.1%	0.5%	Textiles/Clothing	1,987	1.6%	1.2%	2.1%
Milk/Juice Polycoats	411	0.3%	0.2%	0.5%	Carpet/Upholstery	1,917	1.6%	0.9%	2.2%
Frozen Food Polycoats	96	0.1%	0.0%	0.1%	Leather	83	0.1%	0.0%	0.1%
Compostable/Soiled	8,613	7.0%	6.3%	7.8%	Disposable Diapers	457	0.4%	0.2%	0.5%
Paper/Other Materials	2,407	2.0%	1.2%	2.7%	Animal By-Products	147	0.1%	0.0%	0.3%
Other Paper	970	0.8%	0.4%	1.2%	Rubber Products	1,479	1.2%	0.6%	1.8%
Plastic	11,111	9.1%			Tires	80	0.1%	0.0%	0.1%
PET Pop & Liquor	215	0.2%	0.1%	0.2%	Ash	1,016	0.8%	0.1%	1.5%
Other PET Bottles	122	0.1%	0.1%	0.1%	Furniture	254	0.2%	0.0%	0.5%
HDPE Milk & Juice	197	0.2%	0.1%	0.2%	Mattresses	708	0.6%	0.2%	0.9%
Other HDPE Bottles	335	0.3%	0.2%	0.3%	Small Appliances	284	0.2%	0.1%	0.4%
Other Plastic Bottles	82	0.1%	0.0%	0.1%	A/V Equipment	473	0.4%	0.0%	0.7%
Jars & Tubs	304	0.2%	0.2%	0.3%	Ceramics/Porcelain	48	0.0%	0.0%	0.1%
Expanded Polystyrene	493	0.4%	0.3%	0.5%	Non-distinct Fines	249	0.2%	0.1%	0.3%
Other Rigid Packaging	581	0.5%	0.4%	0.6%	Misc. Organics	1,386	1.1%	1.0%	1.3%
Grocery/Bread Bags	623	0.5%	0.4%	0.6%	Misc. Inorganics	206	0.2%	0.0%	0.3%
Garbage Bags	1,739	1.4%	1.2%	1.6%	CDL Wastes	13,131	10.7%		
Other Film	3,595	2.9%	2.6%	3.3%	Dimension Lumber	1,758	1.4%	0.9%	1.9%
Plastic Products	1,425	1.2%	0.8%	1.5%	Other Untreated Wood	750	0.6%	0.3%	0.9%
Plastic/Other Materials	1,400	1.1%	0.8%	1.5%	Treated Wood	1,639	1.3%	0.9%	1.8%
Glass	2,201	1.8%			Contaminated Wood	1,214	1.0%	0.2%	1.7%
Clear Beverage	608	0.5%	0.4%	0.6%	New Gypsum Scrap	1,834	1.5%	0.4%	2.6%
Green Beverage	682	0.6%	0.4%	0.7%	Demo Gypsum Scrap	118	0.1%	0.0%	0.2%
Brown Beverage	155	0.1%	0.1%	0.2%	Fiberglass Insulation	895	0.7%	0.2%	1.3%
Container Glass	35	0.0%	0.0%	0.1%	Rock/Concrete/Brick	791	0.6%	0.1%	1.2%
Fluorescent Tubes	292	0.2%	0.1%	0.4%	Asphaltic Roofing	1,062	0.9%	0.4%	1.3%
Other Glass	429	0.3%	0.3%	0.4%	Other Construction Debris	2,019	1.6%	0.8%	2.5%
Metal	8,316	6.8%			Sand/Soil/Dirt	1,051	0.9%	0.6%	1.1%
Aluminum Cans	75	0.1%	0.0%	0.1%	Hazardous	419	0.3%		
Alum. Foil/Containers	131	0.1%	0.0%	0.2%	Latex Paints	21	0.0%	0.0%	0.0%
Other Aluminum	413	0.3%	0.1%	0.6%	Hazardous Adhesives/Glues	23	0.0%	0.0%	0.0%
Other Nonferrous	884	0.7%	0.5%	0.9%	NonHazardous Adhesives/Glues	47	0.0%	0.0%	0.1%
Tin Food Cans	102	0.1%	0.1%	0.1%	Oil-based Paints/Solvents	4	0.0%	0.0%	0.0%
Empty Aerosol Cans	3,831	3.1%	2.1%	4.1%	Cleaners	0	0.0%	0.0%	0.0%
Other Ferrous	2,513	2.1%	1.5%	2.6%	Pesticides/Herbicides	64	0.1%	0.0%	0.1%
Mixed Metals/Materials	367	0.3%	0.0%	0.7%	Dry-Cell Batteries	0	0.0%	0.0%	0.0%
					Wet-Cell Batteries	7	0.0%	0.0%	0.0%
					Gasoline/Kerosene	13	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	0	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	125	0.1%	0.0%	0.2%
					Other Hazardous Chemicals	115	0.1%	0.0%	0.2%
Total Tons	122,573				Other NonHazardous Chemicals	0	0.0%	0.0%	0.0%
Sample Count	161								

Table 2-8 Composition by Weight: Commercial Roll-Offs
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	25,285	35.5%			Organics	17,501	24.6%		
Newspaper	1,522	2.1%	1.6%	2.6%	Pallets	2,410	3.4%	1.9%	4.9%
OCC/Kraft, unwaxed	5,033	7.1%	6.1%	8.0%	Crates/Boxes	984	1.4%	0.5%	2.2%
OCC/Kraft, waxed	2,365	3.3%	1.8%	4.9%	Leaves and Grass	962	1.3%	0.8%	1.9%
Office Paper	1,315	1.8%	1.4%	2.3%	Prunings	156	0.2%	0.0%	0.5%
Computer Paper	226	0.3%	0.2%	0.5%	Food	12,990	18.2%	15.5%	20.9%
Mixed Low Grade	7,522	10.6%	8.7%	12.4%	Other Materials	5,174	7.3%		
Phone Books	240	0.3%	0.0%	0.8%	Textiles/Clothing	1,227	1.7%	0.7%	2.7%
Milk/Juice Polycoats	446	0.6%	0.1%	1.1%	Carpet/Upholstery	778	1.1%	0.6%	1.6%
Frozen Food Polycoats	160	0.2%	0.0%	0.5%	Leather	77	0.1%	0.0%	0.2%
Compostable/Soiled	5,006	7.0%	5.9%	8.1%	Disposable Diapers	218	0.3%	0.1%	0.5%
Paper/Other Materials	1,038	1.5%	0.9%	2.0%	Animal By-Products	33	0.0%	0.0%	0.1%
Other Paper	413	0.6%	0.3%	0.9%	Rubber Products	297	0.4%	0.1%	0.7%
Plastic	10,160	14.3%			Tires	8	0.0%	0.0%	0.0%
PET Pop & Liquor	84	0.1%	0.1%	0.1%	Ash	398	0.6%	0.3%	0.8%
Other PET Bottles	31	0.0%	0.0%	0.1%	Furniture	114	0.2%	0.0%	0.4%
HDPE Milk & Juice	136	0.2%	0.1%	0.3%	Mattresses	324	0.5%	0.1%	0.8%
Other HDPE Bottles	142	0.2%	0.1%	0.3%	Small Appliances	140	0.2%	0.0%	0.4%
Other Plastic Bottles	39	0.1%	0.0%	0.1%	A/V Equipment	130	0.2%	0.0%	0.3%
Jars & Tubs	242	0.3%	0.1%	0.6%	Ceramics/Porcelain	185	0.3%	0.0%	0.7%
Expanded Polystyrene	412	0.6%	0.4%	0.7%	Non-distinct Fines	560	0.8%	0.2%	1.3%
Other Rigid Packaging	423	0.6%	0.4%	0.8%	Misc. Organics	685	1.0%	0.7%	1.2%
Grocery/Bread Bags	288	0.4%	0.3%	0.5%	Misc. Inorganics	0	0.0%	0.0%	0.0%
Garbage Bags	1,147	1.6%	1.3%	1.9%	CDL Wastes	7,175	10.1%		
Other Film	4,551	6.4%	5.0%	7.7%	Dimension Lumber	1,306	1.8%	1.0%	2.7%
Plastic Products	1,251	1.8%	1.2%	2.3%	Other Untreated Wood	52	0.1%	0.0%	0.1%
Plastic/Other Materials	1,415	2.0%	0.7%	3.2%	Treated Wood	1,263	1.8%	1.1%	2.4%
Glass	1,098	1.5%			Contaminated Wood	645	0.9%	0.3%	1.5%
Clear Beverage	196	0.3%	0.2%	0.4%	New Gypsum Scrap	970	1.4%	0.3%	2.4%
Green Beverage	156	0.2%	0.1%	0.3%	Demo Gypsum Scrap	69	0.1%	0.0%	0.2%
Brown Beverage	50	0.1%	0.0%	0.1%	Fiberglass Insulation	529	0.7%	0.2%	1.3%
Container Glass	13	0.0%	0.0%	0.0%	Rock/Concrete/Brick	132	0.2%	0.0%	0.4%
Fluorescent Tubes	488	0.7%	0.3%	1.1%	Asphaltic Roofing	335	0.5%	0.1%	0.8%
Other Glass	193	0.3%	0.2%	0.3%	Other Construction Debris	1,566	2.2%	0.7%	3.7%
Metal	4,527	6.4%			Sand/Soil/Dirt	309	0.4%	0.3%	0.6%
Aluminum Cans	45	0.1%	0.0%	0.1%	Hazardous	361	0.5%		
Alum. Foil/Containers	92	0.1%	0.0%	0.2%	Latex Paints	15	0.0%	0.0%	0.0%
Other Aluminum	174	0.2%	0.1%	0.4%	Hazardous Adhesives/Glues	0	0.0%	0.0%	0.0%
Other Nonferrous	487	0.7%	0.5%	0.9%	NonHazardous Adhesives/Glues	2	0.0%	0.0%	0.0%
Tin Food Cans	29	0.0%	0.0%	0.1%	Oil-based Paints/Solvents	6	0.0%	0.0%	0.0%
Empty Aerosol Cans	1,889	2.6%	1.8%	3.5%	Cleaners	0	0.0%	0.0%	0.0%
Other Ferrous	1,226	1.7%	1.0%	2.4%	Pesticides/Herbicides	22	0.0%	0.0%	0.1%
Mixed Metals/Materials	584	0.8%	0.2%	1.4%	Dry-Cell Batteries	0	0.0%	0.0%	0.0%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	0	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	0	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	306	0.4%	0.0%	0.8%
					Other Hazardous Chemicals	11	0.0%	0.0%	0.0%
Total Tons	71,280				Other NonHazardous Chemicals	0	0.0%	0.0%	0.0%
Sample Count	187								

2.5 Composition by Generator Type

As discussed in Section 2.1, drivers were asked to identify from which type of business they had collected the sample load. Since commercial garbage trucks often haul waste from a variety of different business types, most samples (43%) are of the “mixed generator” type. The remaining generator-specific analyses are based on a very small number of samples and are thus subject to a relatively wide margin of error.⁶ These results provide rough estimates only.

Figure 2-3 depicts the composition, by weight, of the waste disposed by 12 commercial generator types. Although each generator’s waste stream is unique, paper accounts for at least 20% of each sector’s waste, with the exception of the CDL generator type.

2.5.1 Construction, Demolition & Landclearing

A total of five CDL debris loads was sampled. As shown in Table 2-9, seven materials account for a combined total of 79% of the tonnage.

- Demolition Gypsum Scrap 36.6%
- Sand/Soil/Dirt 8.3%
- Rock/Concrete/Brick 8.2%
- New Gypsum Scrap 7.8%
- Dimension Lumber 6.5%
- Carpet/Upholstery 5.7%
- Other Ferrous Metals 5.4%

2.5.2 Education

A total of five loads from educational institutions was sampled. As shown in Table 2-10, four materials account for a combined total of 56% of the tonnage.

- Food 23.0%
- Compostable/Soiled Paper 17.3%
- Mixed Low Grade Paper 10.5%
- Newspaper 5.0%

⁶ For example, as shown in Table 2-9, demolition gypsum scrap may account for anywhere from 11.1 to 62.2% of the CDL sector’s disposed tonnage.

2.5.3 Health Care

A total of nine loads from health care providers was sampled. As shown in Table 2-11, six materials account for a combined total of 66% of the tonnage.

- Compostable/Soiled Paper 22.5%
- Mixed Low Grade Paper 12.4%
- Food 10.9%
- Other Hazardous Chemicals 8.2%
- Other Film 7.3%
- Garbage Bags 5.0%

2.5.4 Hotel/Motel

A total of five loads from hotel/motels was sampled. As shown in Table 2-12, four materials account for a combined total of 73% of the tonnage.

- Food 42.7%
- Newspaper 11.0%
- Compostable/Soiled Paper 10.2%
- Mixed Low Grade Paper 9.2%

2.5.5 Manufacturing

A total of 25 loads from manufacturing businesses was sampled. As shown in Table 2-13, seven materials account for a combined total of 49% of the tonnage.

- Cardboard/Kraft, Unwaxed 9.3%
- Plastic/Other Materials 8.2%
- Other Plastic Film 7.0%
- Food 6.6%
- Other Ferrous Metal 6.3%
- Dimension Lumber 5.9%
- Mixed Low Grade Paper 5.5%

2.5.6 Office

A total of 19 office waste loads was sampled. As shown in Table 2-14, five materials account for a combined total of 48% of the tonnage.

- Mixed Low Grade Paper 18.6%
- Compostable/Soiled Paper 9.4%
- Food 8.2%
- Office Paper 6.8%
- Textiles/Clothing 5.4%

2.5.7 Other Services

A total of 28 loads from “other services” was sampled. As shown in Table 2-15, four materials account for a combined total of 43% of the tonnage.

- Mixed Low Grade Paper 20.9%
- Food 9.9%
- Compostable/Soiled Paper 6.9%
- Pallets 5.2%

2.5.8 Restaurant

A total of five loads from restaurants was sampled. As Table 2-16 shows, four materials account for a combined total of 69% of the tonnage.

- Food 50.8%
- Other Film Plastics 3.2%
- Cardboard/Kraft, Unwaxed 8.8%
- Mixed Low Grade Paper 6.3%

2.5.9 Retail

A total of 34 loads from retail businesses was sampled. As shown in Table 2-17, six materials account for a combined total of 69% of the tonnage.

- Food 34.1%
- Cardboard/Kraft, Unwaxed 10.9%
- Compostable/Soiled Paper 6.1%
- Mixed Low Grade Paper 6.0%
- Other Film Plastics 5.9%
- Cardboard/Kraft, Waxed 5.7%

2.5.10 Transportation

A total of 10 loads from the transportation industry was sampled. As shown in Table 2-18, eight materials account for a combined total of 64% of the tonnage.

- Pallets 11.2%
- Crates/Boxes 10.8%
- Sand/Soil/Dirt 9.4%
- Cardboard/Kraft, Unwaxed 8.3%
- Treated Wood 7.7%
- Food 5.9%
- Compostable/Soiled Paper 5.8%
- Contaminated Wood 5.3%

2.5.11 Wholesale

A total of 29 loads from wholesale establishments was sampled. As Table 2-19 shows, six materials account for a combined total of 52% of the tonnage.

- Food 19.2%
- Other Film Plastics 5.1%
- Cardboard/Kraft, Waxed 3.0%
- Mixed Low Grade Paper 11.3%
- Cardboard/Kraft, Unwaxed 6.9%
- Pallets 6.8%

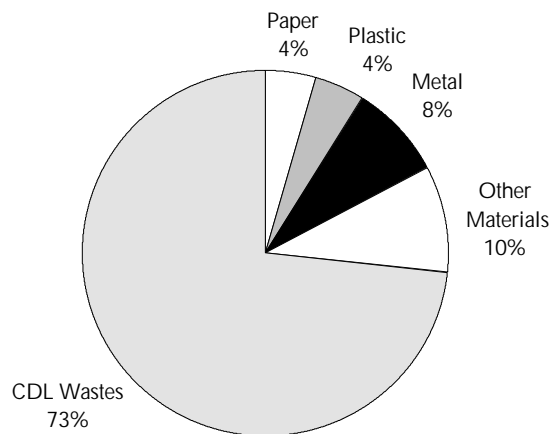
2.5.12 Mixed Commercial Generators

A total of 151 mixed commercial generator loads was sampled. As shown in Table 2-20, four materials account for a combined total of 48% of the tonnage.

- Food 24.6%
- Mixed Low Grade Paper 9.3%
- Compostable/Soiled Paper 7.0%
- Cardboard/Kraft, Unwaxed 6.6%

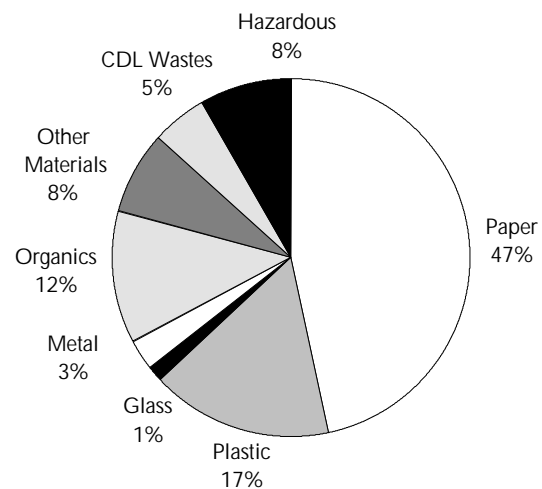
Figure 2-3 Overview of Commercial Composition Estimates, by Generator Type
January - December 1996

Construction, Demolition & Landclearing

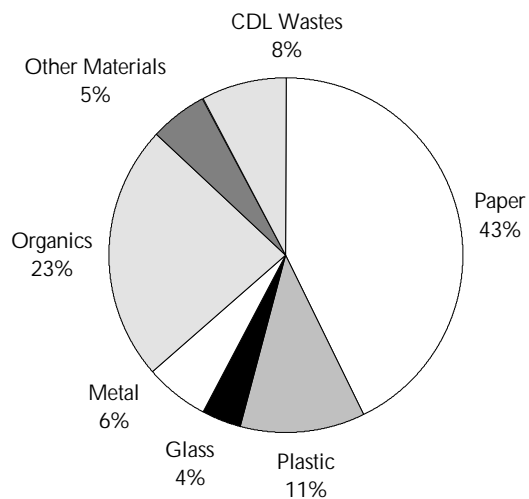


Glass, Hazardous and Organics < 1%

Health Care

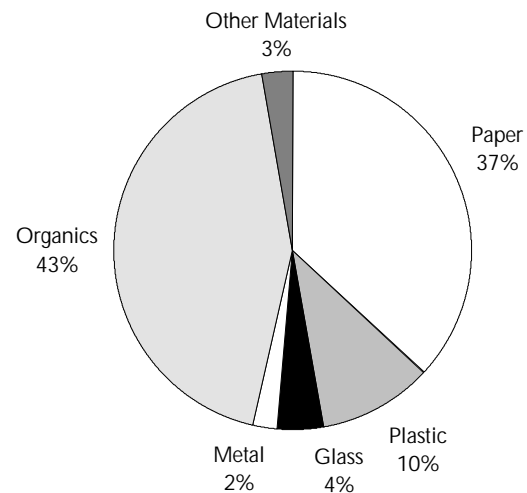


Education



Hazardous < 1%

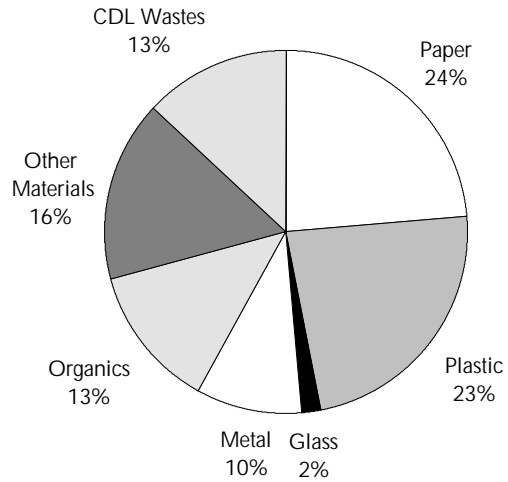
Hotel/Motel



CDL Waste and Hazardous < 1%

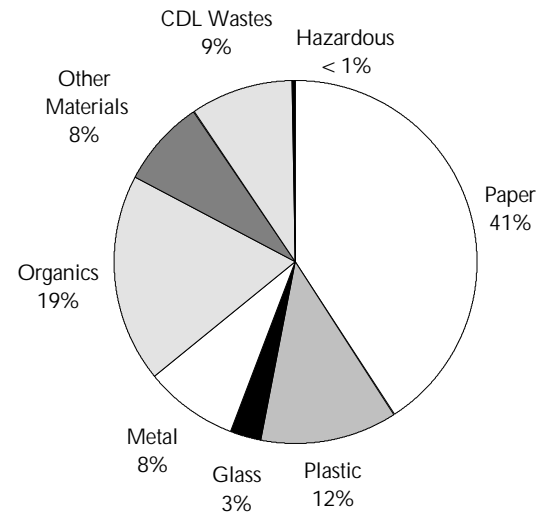
Figure 2-2 Overview of Commercial Composition Estimates, by Generator Type, continued
January - December 1996

Manufacturing

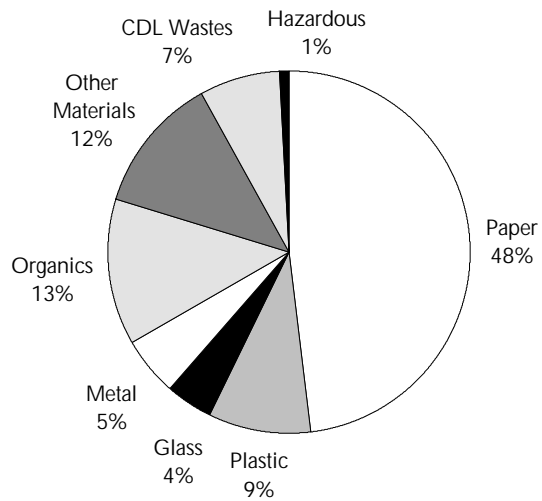


Hazardous < 1%

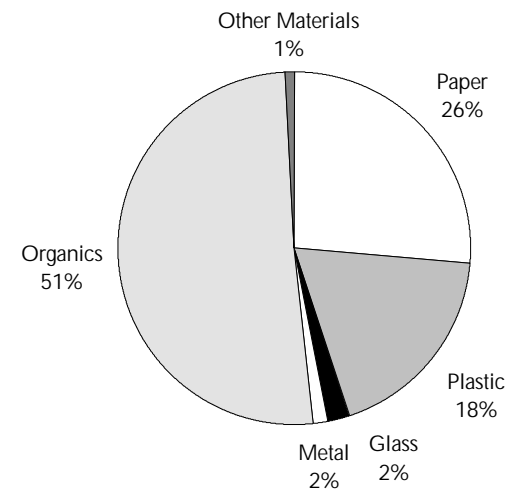
Other Services



Office



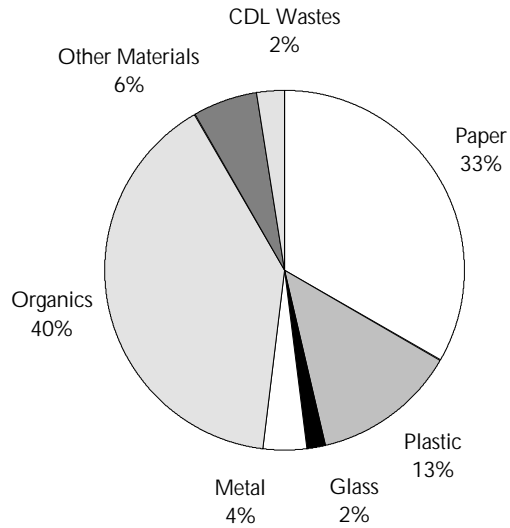
Restaurant



CDL Waste and Hazardous < 1%

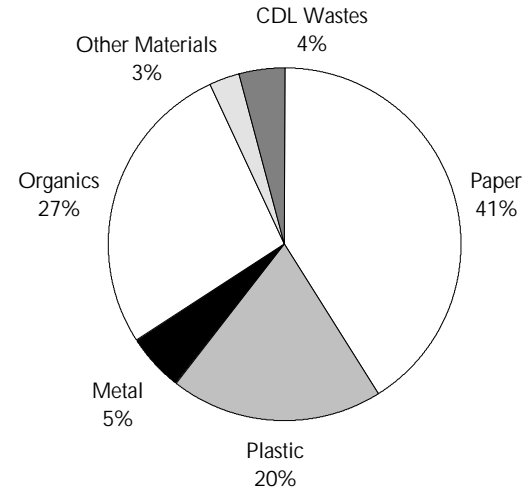
Figure 2-2 Overview of Commercial Composition Estimates, by Generator Type, continued
January - December 1996

Retail



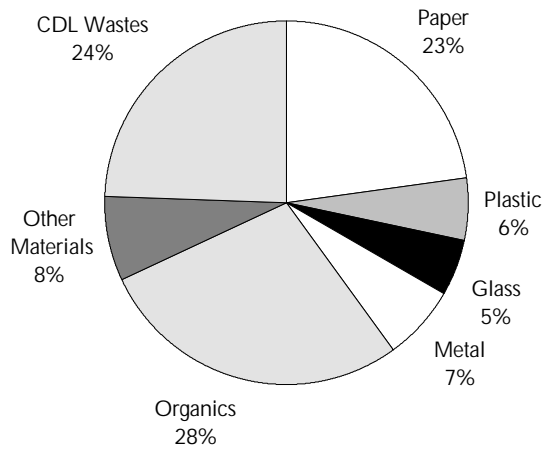
Hazardous < 1%

Wholesale



Glass and Hazardous < 1%

Transportation



Hazardous < 1%

Mixed Commercial Generators

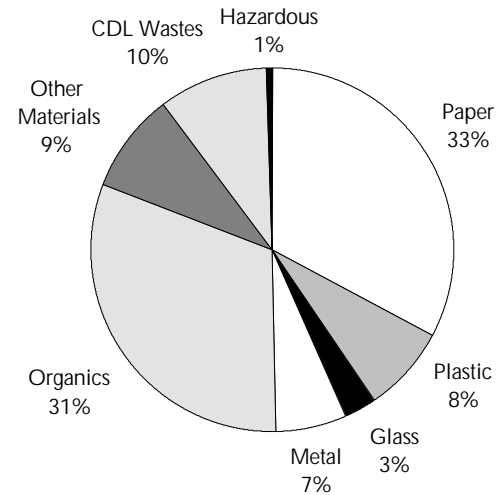


Table 2-9 Composition by Weight: Construction, Demolition & Landclearing
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	4.4%			Organics	0.1%		
Newspaper	0.0%	0.0%	0.0%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	2.9%	0.0%	5.8%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	0.0%	0.0%	0.0%
Office Paper	0.0%	0.0%	0.0%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.0%	0.0%	0.0%	Food	0.1%	0.0%	0.2%
Mixed Low Grade	0.7%	0.0%	1.6%	Other Materials	9.5%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	0.2%	0.0%	0.5%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	5.7%	0.0%	14.9%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	0.6%	0.0%	1.6%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	0.1%	0.0%	0.4%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.0%	0.0%	0.0%	Rubber Products	0.4%	0.0%	0.8%
Plastic	4.4%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	0.0%	0.0%	0.0%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.0%	0.0%	0.0%	Small Appliances	0.0%	0.0%	0.0%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	0.0%	0.0%	0.0%
Expanded Polystyrene	0.1%	0.0%	0.2%	Non-distinct Fines	0.0%	0.0%	0.0%
Other Rigid Packaging	0.3%	0.0%	0.8%	Misc. Organics	0.0%	0.0%	0.0%
Grocery/Bread Bags	0.0%	0.0%	0.0%	Misc. Inorganics	3.2%	0.0%	8.7%
Garbage Bags	0.0%	0.0%	0.0%	CDL Wastes	73.0%		
Other Film	3.3%	0.8%	5.7%	Dimension Lumber	6.5%	1.4%	11.7%
Plastic Products	0.7%	0.0%	1.6%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	0.0%	0.0%	0.0%	Treated Wood	0.1%	0.0%	0.2%
Glass	0.2%			Contaminated Wood	1.4%	0.0%	3.4%
Clear Beverage	0.1%	0.0%	0.3%	New Gypsum Scrap	7.8%	0.0%	20.1%
Green Beverage	0.0%	0.0%	0.0%	Demo Gypsum Scrap	36.6%	11.1%	62.2%
Brown Beverage	0.0%	0.0%	0.1%	Fiberglass Insulation	0.8%	0.0%	2.1%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	8.2%	0.0%	21.1%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.0%	0.0%	0.0%	Other Construction Debris	3.1%	0.9%	5.4%
Metal	8.4%			Sand/Soil/Dirt	8.3%	0.0%	21.4%
Aluminum Cans	0.0%	0.0%	0.1%	Hazardous	0.0%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.3%	0.0%	0.7%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	2.5%	0.0%	6.7%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.1%	0.0%	0.3%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	5.4%	2.0%	8.8%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	0.1%	0.0%	0.2%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	5			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-10 Composition by Weight: Education
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	42.8%			Organics	23.4%		
Newspaper	5.0%	2.8%	7.1%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	4.9%	3.5%	6.3%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.5%	0.0%	1.0%	Leaves and Grass	0.3%	0.0%	0.7%
Office Paper	1.6%	0.7%	2.5%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.2%	0.0%	0.4%	Food	23.0%	15.3%	30.8%
Mixed Low Grade	10.5%	7.7%	13.4%	Other Materials	5.2%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	1.0%	0.2%	1.9%
Milk/Juice Polycoats	0.7%	0.4%	1.0%	Carpet/Upholstery	0.3%	0.0%	0.6%
Frozen Food Polycoats	0.1%	0.0%	0.2%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	17.3%	12.1%	22.4%	Disposable Diapers	0.1%	0.0%	0.1%
Paper/Other Materials	0.7%	0.0%	1.5%	Animal By-Products	0.0%	0.0%	0.1%
Other Paper	1.3%	0.0%	3.2%	Rubber Products	1.3%	0.0%	2.7%
Plastic	11.3%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.3%	0.2%	0.4%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.2%	Furniture	0.0%	0.0%	0.0%
HDPE Milk & Juice	0.5%	0.3%	0.7%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.3%	0.1%	0.5%	Small Appliances	0.3%	0.0%	0.8%
Other Plastic Bottles	0.1%	0.0%	0.3%	A/V Equipment	0.0%	0.0%	0.1%
Jars & Tubs	0.4%	0.2%	0.6%	Ceramics/Porcelain	0.2%	0.0%	0.4%
Expanded Polystyrene	0.2%	0.1%	0.4%	Non-distinct Fines	0.4%	0.1%	0.7%
Other Rigid Packaging	0.9%	0.4%	1.4%	Misc. Organics	1.6%	0.0%	3.7%
Grocery/Bread Bags	0.4%	0.1%	0.6%	Misc. Inorganics	0.1%	0.0%	0.1%
Garbage Bags	3.7%	2.8%	4.7%	CDL Wastes	7.8%		
Other Film	2.0%	1.4%	2.6%	Dimension Lumber	1.1%	0.1%	2.1%
Plastic Products	1.4%	0.2%	2.6%	Other Untreated Wood	0.0%	0.0%	0.1%
Plastic/Other Materials	0.9%	0.1%	1.8%	Treated Wood	1.3%	0.0%	2.9%
Glass	3.6%			Contaminated Wood	0.0%	0.0%	0.1%
Clear Beverage	2.3%	1.3%	3.2%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.5%	0.1%	0.9%	Demo Gypsum Scrap	1.0%	0.0%	2.4%
Brown Beverage	0.4%	0.1%	0.8%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.2%	0.1%	0.3%	Rock/Concrete/Brick	1.0%	0.0%	2.7%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.2%	0.0%	0.4%	Other Construction Debris	2.8%	0.0%	6.5%
Metal	5.8%			Sand/Soil/Dirt	0.6%	0.0%	1.3%
Aluminum Cans	0.8%	0.5%	1.1%	Hazardous	0.1%		
Alum. Foil/Containers	0.2%	0.0%	0.4%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.1%	0.0%	0.2%	Hazardous Adhesives/Glues	0.1%	0.0%	0.2%
Other Nonferrous	0.0%	0.0%	0.1%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	1.7%	1.1%	2.4%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	1.7%	0.0%	4.3%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.2%	0.0%	3.0%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	15			Other NonHazardous Chemicals	0.1%	0.0%	0.2%

Table 2-11 Composition by Weight: Health Care
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	46.6%			Organics	11.7%		
Newspaper	1.8%	0.9%	2.7%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	2.6%	0.8%	4.4%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.3%	0.0%	0.8%	Leaves and Grass	0.8%	0.0%	1.9%
Office Paper	3.3%	0.8%	5.7%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.5%	0.0%	1.0%	Food	10.9%	5.1%	16.6%
Mixed Low Grade	12.4%	6.1%	18.7%	Other Materials	7.7%		
Phone Books	0.3%	0.0%	0.8%	Textiles/Clothing	1.2%	0.0%	2.8%
Milk/Juice Polycoats	0.4%	0.1%	0.7%	Carpet/Upholstery	1.1%	0.0%	2.3%
Frozen Food Polycoats	0.1%	0.0%	0.2%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	22.5%	15.7%	29.4%	Disposable Diapers	1.8%	0.0%	4.0%
Paper/Other Materials	1.3%	0.3%	2.3%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	1.2%	0.0%	3.0%	Rubber Products	1.7%	0.5%	2.9%
Plastic	16.5%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.2%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.1%	Furniture	0.2%	0.0%	0.4%
HDPE Milk & Juice	0.2%	0.1%	0.2%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.3%	0.1%	0.5%	Small Appliances	0.0%	0.0%	0.0%
Other Plastic Bottles	0.3%	0.1%	0.4%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	0.3%	0.2%	0.4%	Ceramics/Porcelain	0.0%	0.0%	0.1%
Expanded Polystyrene	0.7%	0.3%	1.2%	Non-distinct Fines	0.8%	0.3%	1.4%
Other Rigid Packaging	0.8%	0.5%	1.1%	Misc. Organics	0.0%	0.0%	0.0%
Grocery/Bread Bags	0.3%	0.0%	0.6%	Misc. Inorganics	0.9%	0.0%	1.9%
Garbage Bags	5.0%	1.6%	8.5%	CDL Wastes	4.9%		
Other Film	7.3%	0.3%	14.3%	Dimension Lumber	0.4%	0.0%	1.1%
Plastic Products	0.9%	0.2%	1.7%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	0.3%	0.0%	0.6%	Treated Wood	0.2%	0.0%	0.5%
Glass	1.5%			Contaminated Wood	0.5%	0.0%	1.3%
Clear Beverage	1.2%	0.7%	1.8%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.2%	0.0%	0.3%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.0%	0.0%	0.0%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	3.0%	0.0%	7.8%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.0%	0.0%	0.1%	Other Construction Debris	0.7%	0.0%	1.9%
Metal	2.8%			Sand/Soil/Dirt	0.1%	0.0%	0.2%
Aluminum Cans	0.3%	0.2%	0.4%	Hazardous	8.4%		
Alum. Foil/Containers	0.2%	0.0%	0.6%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.2%	0.0%	0.4%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.3%	0.0%	0.7%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.3%	0.1%	0.5%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	0.9%	0.0%	1.8%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	0.6%	0.2%	1.0%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	8.2%	0.4%	16.0%
Sample Count	9			Other NonHazardous Chemicals	0.2%	0.0%	0.5%

Table 2-12 Composition by Weight: Hotel/Motel
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	36.8%			Organics	43.3%		
Newspaper	11.0%	2.2%	19.8%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	2.8%	1.4%	4.2%	Crates/Boxes	0.6%	0.0%	1.6%
OCC/Kraft, waxed	2.4%	0.0%	6.2%	Leaves and Grass	0.0%	0.0%	0.0%
Office Paper	0.8%	0.3%	1.3%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.0%	0.0%	0.0%	Food	42.7%	28.3%	57.1%
Mixed Low Grade	9.2%	5.2%	13.2%	Other Materials	2.7%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	1.1%	0.1%	2.1%
Milk/Juice Polycoats	0.2%	0.0%	0.5%	Carpet/Upholstery	0.0%	0.0%	0.1%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	10.2%	2.4%	18.1%	Disposable Diapers	0.3%	0.0%	0.8%
Paper/Other Materials	0.1%	0.0%	0.3%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.0%	0.0%	0.0%	Rubber Products	0.1%	0.0%	0.2%
Plastic	10.1%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.3%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.2%	Furniture	0.0%	0.0%	0.0%
HDPE Milk & Juice	0.1%	0.0%	0.3%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.1%	0.0%	0.1%	Small Appliances	0.0%	0.0%	0.0%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	2.0%	0.0%	5.0%	Ceramics/Porcelain	0.0%	0.0%	0.0%
Expanded Polystyrene	0.0%	0.0%	0.1%	Non-distinct Fines	0.7%	0.0%	1.8%
Other Rigid Packaging	0.1%	0.0%	0.3%	Misc. Organics	0.3%	0.0%	0.7%
Grocery/Bread Bags	0.9%	0.0%	2.0%	Misc. Inorganics	0.3%	0.0%	0.7%
Garbage Bags	2.6%	0.5%	4.7%	CDL Wastes	0.2%		
Other Film	2.3%	1.7%	2.9%	Dimension Lumber	0.0%	0.0%	0.0%
Plastic Products	0.8%	0.0%	1.8%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	0.8%	0.2%	1.5%	Treated Wood	0.0%	0.0%	0.0%
Glass	4.1%			Contaminated Wood	0.2%	0.0%	0.4%
Clear Beverage	1.7%	0.3%	3.1%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.7%	0.2%	1.2%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.2%	0.0%	0.5%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	0.0%	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	1.5%	0.0%	4.0%	Other Construction Debris	0.0%	0.0%	0.0%
Metal	2.4%			Sand/Soil/Dirt	0.0%	0.0%	0.0%
Aluminum Cans	0.2%	0.0%	0.5%	Hazardous	0.4%		
Alum. Foil/Containers	0.1%	0.0%	0.2%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.1%	0.0%	0.3%	Hazardous Adhesives/Glues	0.4%	0.0%	1.1%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.4%	0.3%	0.6%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	0.5%	0.0%	1.1%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	0.9%	0.0%	2.1%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	5			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-13 Composition by Weight: Manufacturing
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	23.6%			Organics	12.9%		
Newspaper	0.6%	0.3%	0.9%	Pallets	4.5%	1.4%	7.5%
OCC/Kraft, unwaxed	9.3%	6.2%	12.5%	Crates/Boxes	1.6%	0.0%	3.5%
OCC/Kraft, waxed	0.1%	0.0%	0.3%	Leaves and Grass	0.3%	0.0%	0.7%
Office Paper	1.0%	0.0%	2.1%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.3%	0.0%	0.6%	Food	6.6%	2.4%	10.9%
Mixed Low Grade	5.5%	2.5%	8.5%	Other Materials	15.9%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	3.9%	0.4%	7.4%
Milk/Juice Polycoats	2.2%	0.0%	5.6%	Carpet/Upholstery	3.3%	0.8%	5.9%
Frozen Food Polycoats	1.4%	0.0%	3.7%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	2.4%	1.3%	3.5%	Disposable Diapers	0.2%	0.0%	0.3%
Paper/Other Materials	0.5%	0.3%	0.7%	Animal By-Products	0.3%	0.0%	0.8%
Other Paper	0.2%	0.0%	0.4%	Rubber Products	0.5%	0.1%	0.8%
Plastic	23.3%			Tires	0.3%	0.0%	0.7%
PET Pop & Liquor	0.1%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	2.4%	0.0%	5.6%
HDPE Milk & Juice	0.4%	0.0%	0.9%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.3%	0.1%	0.5%	Small Appliances	0.0%	0.0%	0.0%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	1.2%	0.0%	2.8%	Ceramics/Porcelain	0.0%	0.0%	0.0%
Expanded Polystyrene	0.4%	0.1%	0.7%	Non-distinct Fines	0.6%	0.2%	1.1%
Other Rigid Packaging	0.4%	0.1%	0.7%	Misc. Organics	1.5%	0.0%	3.3%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	3.0%	0.0%	6.5%
Garbage Bags	0.8%	0.3%	1.3%	CDL Wastes	13.1%		
Other Film	7.0%	3.9%	10.1%	Dimension Lumber	5.9%	1.6%	10.1%
Plastic Products	4.5%	1.5%	7.4%	Other Untreated Wood	0.1%	0.0%	0.1%
Plastic/Other Materials	8.2%	0.0%	16.8%	Treated Wood	2.0%	0.0%	3.9%
Glass	1.6%			Contaminated Wood	0.3%	0.0%	0.7%
Clear Beverage	0.5%	0.2%	0.8%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.1%	0.0%	0.1%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.1%	0.0%	0.2%	Fiberglass Insulation	0.1%	0.0%	0.4%
Container Glass	0.1%	0.0%	0.1%	Rock/Concrete/Brick	0.3%	0.0%	0.6%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.9%	0.0%	2.4%	Other Construction Debris	0.0%	0.0%	0.0%
Metal	9.5%			Sand/Soil/Dirt	4.5%	0.0%	11.0%
Aluminum Cans	0.2%	0.1%	0.4%	Hazardous	0.0%		
Alum. Foil/Containers	0.0%	0.0%	0.1%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.0%	0.0%	0.0%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.6%	0.0%	1.5%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	1.1%	0.0%	2.3%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	6.3%	2.0%	10.6%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.2%	0.6%	1.7%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	25			Other NonHazardous Chemicals	0.0%	0.0%	0.1%

Table 2-14 Composition by Weight: Office
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	48.0%			Organics	13.2%		
Newspaper	3.4%	2.2%	4.6%	Pallets	1.6%	0.0%	4.1%
OCC/Kraft, unwaxed	4.0%	2.2%	5.8%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	3.3%	0.2%	6.5%
Office Paper	6.8%	3.8%	9.9%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.3%	0.0%	0.7%	Food	8.2%	3.1%	13.3%
Mixed Low Grade	18.6%	9.9%	27.3%	Other Materials	12.1%		
Phone Books	3.1%	0.0%	8.1%	Textiles/Clothing	5.4%	0.0%	14.1%
Milk/Juice Polycoats	0.1%	0.0%	0.2%	Carpet/Upholstery	0.7%	0.0%	1.9%
Frozen Food Polycoats	0.0%	0.0%	0.1%	Leather	0.0%	0.0%	0.1%
Compostable/Soiled	9.4%	6.3%	12.5%	Disposable Diapers	0.4%	0.0%	0.9%
Paper/Other Materials	2.1%	1.2%	3.0%	Animal By-Products	0.1%	0.0%	0.1%
Other Paper	0.3%	0.0%	0.5%	Rubber Products	0.2%	0.0%	0.4%
Plastic	9.1%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.2%	0.1%	0.2%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.1%	Furniture	2.5%	0.0%	6.0%
HDPE Milk & Juice	0.1%	0.1%	0.2%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.5%	0.0%	1.2%	Small Appliances	0.3%	0.0%	0.7%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.6%	0.0%	1.6%
Jars & Tubs	0.1%	0.1%	0.2%	Ceramics/Porcelain	1.0%	0.0%	2.1%
Expanded Polystyrene	1.0%	0.2%	1.8%	Non-distinct Fines	0.3%	0.0%	0.6%
Other Rigid Packaging	0.3%	0.2%	0.5%	Misc. Organics	0.1%	0.0%	0.1%
Grocery/Bread Bags	0.1%	0.0%	0.2%	Misc. Inorganics	0.6%	0.0%	1.6%
Garbage Bags	1.6%	1.1%	2.1%	CDL Wastes	7.2%		
Other Film	2.1%	0.4%	3.9%	Dimension Lumber	1.2%	0.0%	3.2%
Plastic Products	2.1%	0.0%	4.4%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	0.9%	0.4%	1.3%	Treated Wood	1.6%	0.0%	3.2%
Glass	4.3%			Contaminated Wood	1.6%	0.0%	3.7%
Clear Beverage	1.1%	0.6%	1.6%	New Gypsum Scrap	0.0%	0.0%	0.1%
Green Beverage	0.4%	0.0%	0.9%	Demo Gypsum Scrap	1.3%	0.0%	2.9%
Brown Beverage	0.2%	0.0%	0.3%	Fiberglass Insulation	0.3%	0.0%	0.6%
Container Glass	0.0%	0.0%	0.1%	Rock/Concrete/Brick	0.0%	0.0%	0.0%
Fluorescent Tubes	0.1%	0.0%	0.1%	Asphaltic Roofing	0.1%	0.0%	0.2%
Other Glass	2.5%	0.0%	5.5%	Other Construction Debris	1.0%	0.0%	2.2%
Metal	5.1%			Sand/Soil/Dirt	0.1%	0.0%	0.2%
Aluminum Cans	0.4%	0.3%	0.6%	Hazardous	0.9%		
Alum. Foil/Containers	0.0%	0.0%	0.1%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.0%	0.0%	0.0%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.2%	0.1%	0.3%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	1.5%	0.0%	3.3%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	3.0%	0.0%	7.3%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.9%	0.0%	2.3%
Sample Count	19			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-15 Composition by Weight: Other Services
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	41.0%			Organics	18.7%		
Newspaper	1.7%	1.0%	2.4%	Pallets	5.2%	0.2%	10.1%
OCC/Kraft, unwaxed	4.6%	3.4%	5.9%	Crates/Boxes	0.9%	0.0%	1.7%
OCC/Kraft, waxed	0.0%	0.0%	0.1%	Leaves and Grass	2.1%	0.7%	3.5%
Office Paper	2.1%	1.2%	2.9%	Prunings	0.7%	0.0%	2.0%
Computer Paper	0.5%	0.0%	1.1%	Food	9.9%	5.9%	13.9%
Mixed Low Grade	20.9%	12.2%	29.6%	Other Materials	7.8%		
Phone Books	0.2%	0.0%	0.3%	Textiles/Clothing	1.4%	0.6%	2.2%
Milk/Juice Polycoats	1.2%	0.0%	2.5%	Carpet/Upholstery	0.6%	0.0%	1.2%
Frozen Food Polycoats	0.0%	0.0%	0.1%	Leather	0.1%	0.0%	0.2%
Compostable/Soiled	6.9%	4.2%	9.5%	Disposable Diapers	0.6%	0.1%	1.1%
Paper/Other Materials	1.5%	0.7%	2.3%	Animal By-Products	0.4%	0.0%	0.9%
Other Paper	1.4%	0.1%	2.6%	Rubber Products	0.8%	0.2%	1.3%
Plastic	12.1%			Tires	0.1%	0.0%	0.2%
PET Pop & Liquor	0.1%	0.1%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.1%	Furniture	1.3%	0.0%	2.9%
HDPE Milk & Juice	0.1%	0.1%	0.1%	Mattresses	0.9%	0.0%	2.5%
Other HDPE Bottles	0.1%	0.1%	0.2%	Small Appliances	0.2%	0.0%	0.6%
Other Plastic Bottles	0.1%	0.0%	0.3%	A/V Equipment	0.1%	0.0%	0.1%
Jars & Tubs	0.1%	0.0%	0.1%	Ceramics/Porcelain	0.4%	0.0%	0.9%
Expanded Polystyrene	0.4%	0.2%	0.6%	Non-distinct Fines	0.6%	0.1%	1.2%
Other Rigid Packaging	1.3%	0.0%	2.5%	Misc. Organics	0.2%	0.0%	0.4%
Grocery/Bread Bags	0.6%	0.3%	1.0%	Misc. Inorganics	0.1%	0.0%	0.3%
Garbage Bags	1.6%	0.9%	2.3%	CDL Wastes	9.2%		
Other Film	3.9%	1.6%	6.2%	Dimension Lumber	3.1%	0.0%	6.4%
Plastic Products	1.7%	0.8%	2.6%	Other Untreated Wood	0.2%	0.0%	0.4%
Plastic/Other Materials	1.9%	0.2%	3.6%	Treated Wood	2.3%	0.8%	3.7%
Glass	2.7%			Contaminated Wood	1.5%	0.0%	3.9%
Clear Beverage	1.7%	0.1%	3.4%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.2%	0.1%	0.4%	Demo Gypsum Scrap	0.1%	0.0%	0.2%
Brown Beverage	0.3%	0.1%	0.4%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.1%	0.0%	0.2%	Rock/Concrete/Brick	0.1%	0.0%	0.2%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	1.2%	0.0%	2.8%
Other Glass	0.4%	0.0%	0.8%	Other Construction Debris	0.1%	0.0%	0.3%
Metal	8.3%			Sand/Soil/Dirt	0.6%	0.0%	1.2%
Aluminum Cans	0.3%	0.2%	0.5%	Hazardous	0.2%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.0%	0.0%	0.1%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.0%	0.0%	0.1%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	1.0%	0.3%	1.6%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.4%	0.5%	4.3%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	4.4%	1.7%	7.1%	Dry-Cell Batteries	0.2%	0.0%	0.3%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	28			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-16 Composition by Weight: Restaurant
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	26.4%			Organics	50.8%		
Newspaper	1.7%	0.0%	3.7%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	8.8%	3.6%	13.9%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	1.5%	0.3%	2.7%	Leaves and Grass	0.0%	0.0%	0.0%
Office Paper	1.0%	0.2%	1.9%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.5%	0.0%	1.3%	Food	50.8%	31.2%	70.4%
Mixed Low Grade	6.3%	1.7%	11.0%	Other Materials	0.7%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	0.4%	0.0%	1.1%
Milk/Juice Polycoats	0.2%	0.0%	0.4%	Carpet/Upholstery	0.2%	0.0%	0.5%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	3.8%	0.0%	8.0%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	0.2%	0.0%	0.5%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	2.5%	0.0%	6.5%	Rubber Products	0.0%	0.0%	0.0%
Plastic	18.4%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.2%	0.0%	0.5%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	0.0%	0.0%	0.0%
HDPE Milk & Juice	0.1%	0.0%	0.3%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.1%	0.0%	0.4%	Small Appliances	0.0%	0.0%	0.0%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	0.3%	0.1%	0.5%	Ceramics/Porcelain	0.1%	0.0%	0.2%
Expanded Polystyrene	0.1%	0.0%	0.2%	Non-distinct Fines	0.0%	0.0%	0.1%
Other Rigid Packaging	0.4%	0.0%	0.8%	Misc. Organics	0.0%	0.0%	0.1%
Grocery/Bread Bags	0.2%	0.0%	0.4%	Misc. Inorganics	0.0%	0.0%	0.0%
Garbage Bags	2.7%	1.1%	4.4%	CDL Wastes	0.0%		
Other Film	13.2%	0.0%	32.5%	Dimension Lumber	0.0%	0.0%	0.0%
Plastic Products	1.0%	0.0%	2.4%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	0.0%	0.0%	0.0%	Treated Wood	0.0%	0.0%	0.0%
Glass	2.1%			Contaminated Wood	0.0%	0.0%	0.0%
Clear Beverage	0.7%	0.1%	1.2%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.9%	0.1%	1.8%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.5%	0.0%	1.0%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.1%	0.0%	0.2%	Rock/Concrete/Brick	0.0%	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.0%	0.0%	0.0%	Other Construction Debris	0.0%	0.0%	0.0%
Metal	1.5%			Sand/Soil/Dirt	0.0%	0.0%	0.0%
Aluminum Cans	0.1%	0.0%	0.3%	Hazardous	0.0%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.0%	0.0%	0.0%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.2%	0.0%	0.6%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	1.0%	0.2%	1.8%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.1%	0.0%	0.3%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	0.0%	0.0%	0.0%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	0.0%	0.0%	0.0%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	5			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-17 Composition by Weight: Retail
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	33.4%			Organics	39.8%		
Newspaper	2.3%	0.6%	4.1%	Pallets	0.6%	0.0%	1.4%
OCC/Kraft, unwaxed	10.9%	8.0%	13.7%	Crates/Boxes	1.2%	0.6%	1.9%
OCC/Kraft, waxed	5.7%	3.6%	7.8%	Leaves and Grass	3.3%	1.2%	5.5%
Office Paper	1.0%	0.1%	1.9%	Prunings	0.5%	0.0%	1.4%
Computer Paper	0.1%	0.0%	0.1%	Food	34.1%	28.2%	40.0%
Mixed Low Grade	6.0%	4.3%	7.7%	Other Materials	5.9%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	1.3%	0.1%	2.5%
Milk/Juice Polycoats	0.3%	0.1%	0.4%	Carpet/Upholstery	0.7%	0.0%	1.5%
Frozen Food Polycoats	0.1%	0.0%	0.1%	Leather	0.5%	0.0%	1.2%
Compostable/Soiled	6.1%	4.5%	7.8%	Disposable Diapers	0.3%	0.0%	0.8%
Paper/Other Materials	0.8%	0.3%	1.4%	Animal By-Products	0.2%	0.0%	0.4%
Other Paper	0.1%	0.0%	0.3%	Rubber Products	0.1%	0.0%	0.1%
Plastic	13.0%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.1%	0.1%	Ash	0.0%	0.0%	0.1%
Other PET Bottles	0.1%	0.0%	0.1%	Furniture	0.3%	0.0%	0.8%
HDPE Milk & Juice	0.2%	0.1%	0.3%	Mattresses	0.1%	0.0%	0.3%
Other HDPE Bottles	0.2%	0.1%	0.2%	Small Appliances	0.6%	0.1%	1.2%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.7%	0.0%	1.8%
Jars & Tubs	0.2%	0.1%	0.3%	Ceramics/Porcelain	0.1%	0.0%	0.2%
Expanded Polystyrene	0.6%	0.4%	0.9%	Non-distinct Fines	0.4%	0.2%	0.6%
Other Rigid Packaging	0.6%	0.3%	0.8%	Misc. Organics	0.1%	0.0%	0.2%
Grocery/Bread Bags	0.7%	0.3%	1.2%	Misc. Inorganics	0.3%	0.0%	0.7%
Garbage Bags	2.0%	1.0%	2.9%	CDL Wastes	2.4%		
Other Film	5.9%	4.5%	7.3%	Dimension Lumber	0.1%	0.0%	0.3%
Plastic Products	1.2%	0.6%	1.8%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	1.3%	0.5%	2.0%	Treated Wood	1.4%	0.0%	3.2%
Glass	1.5%			Contaminated Wood	0.3%	0.0%	0.7%
Clear Beverage	0.9%	0.4%	1.3%	New Gypsum Scrap	0.1%	0.0%	0.2%
Green Beverage	0.3%	0.0%	0.5%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.2%	0.1%	0.3%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.1%	0.0%	0.2%	Rock/Concrete/Brick	0.0%	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.1%	0.0%	0.3%	Other Construction Debris	0.1%	0.0%	0.3%
Metal	3.9%			Sand/Soil/Dirt	0.3%	0.0%	0.9%
Aluminum Cans	0.2%	0.1%	0.3%	Hazardous	0.0%		
Alum. Foil/Containers	0.1%	0.0%	0.2%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.1%	0.0%	0.1%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.3%	0.0%	0.5%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.4%	0.2%	0.5%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.1%
Other Ferrous	1.6%	0.0%	3.7%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.2%	0.0%	2.7%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	34			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-18 Composition by Weight: Transportation
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	22.8%			Organics	28.1%		
Newspaper	1.7%	1.0%	2.4%	Pallets	11.2%	2.7%	19.6%
OCC/Kraft, unwaxed	8.3%	4.8%	11.8%	Crates/Boxes	10.8%	0.0%	23.7%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	0.0%	0.0%	0.0%
Office Paper	1.1%	0.0%	2.4%	Prunings	0.2%	0.0%	0.4%
Computer Paper	0.2%	0.0%	0.4%	Food	5.9%	1.9%	9.9%
Mixed Low Grade	4.1%	2.2%	6.1%	Other Materials	7.5%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	0.4%	0.2%	0.7%
Milk/Juice Polycoats	0.1%	0.0%	0.2%	Carpet/Upholstery	0.6%	0.0%	1.5%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	5.8%	4.0%	7.5%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	1.2%	0.0%	2.9%	Animal By-Products	0.8%	0.0%	1.7%
Other Paper	0.2%	0.0%	0.6%	Rubber Products	3.0%	0.9%	5.1%
Plastic	5.6%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.2%	Ash	0.1%	0.0%	0.2%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	0.0%	0.0%	0.0%
HDPE Milk & Juice	0.1%	0.0%	0.2%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.1%	0.0%	0.2%	Small Appliances	0.8%	0.0%	2.1%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	0.1%	0.0%	0.1%	Ceramics/Porcelain	0.0%	0.0%	0.0%
Expanded Polystyrene	0.9%	0.1%	1.8%	Non-distinct Fines	0.8%	0.0%	1.5%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	0.4%	0.0%	1.0%
Grocery/Bread Bags	0.7%	0.2%	1.2%	Misc. Inorganics	0.8%	0.0%	2.0%
Garbage Bags	0.7%	0.4%	1.0%	CDL Wastes	24.4%		
Other Film	0.9%	0.1%	1.7%	Dimension Lumber	0.7%	0.1%	1.4%
Plastic Products	1.3%	0.5%	2.0%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	0.6%	0.2%	1.1%	Treated Wood	7.7%	1.4%	13.9%
Glass	4.9%			Contaminated Wood	5.3%	0.0%	12.3%
Clear Beverage	0.9%	0.0%	1.8%	New Gypsum Scrap	0.0%	0.0%	0.1%
Green Beverage	0.5%	0.0%	1.2%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.7%	0.0%	1.8%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.1%	0.0%	0.2%	Rock/Concrete/Brick	1.2%	0.0%	3.0%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	2.7%	0.0%	6.6%	Other Construction Debris	0.0%	0.0%	0.0%
Metal	6.6%			Sand/Soil/Dirt	9.4%	0.0%	23.5%
Aluminum Cans	0.2%	0.1%	0.4%	Hazardous	0.1%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.4%	0.0%	0.8%	Hazardous Adhesives/Glues	0.0%	0.0%	0.1%
Other Nonferrous	0.3%	0.0%	0.5%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.2%	0.1%	0.3%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.1%
Other Ferrous	2.0%	0.8%	3.1%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	3.5%	0.4%	6.5%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	10			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-19 Composition by Weight: Wholesale
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	40.9%			Organics	27.2%		
Newspaper	0.6%	0.1%	1.1%	Pallets	6.8%	0.4%	13.2%
OCC/Kraft, unwaxed	6.9%	4.0%	9.8%	Crates/Boxes	1.3%	0.3%	2.2%
OCC/Kraft, waxed	13.0%	4.7%	21.3%	Leaves and Grass	0.0%	0.0%	0.0%
Office Paper	1.1%	0.2%	2.0%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.6%	0.1%	1.2%	Food	19.2%	11.3%	27.0%
Mixed Low Grade	11.3%	7.3%	15.2%	Other Materials	2.6%		
Phone Books	0.1%	0.0%	0.1%	Textiles/Clothing	0.2%	0.0%	0.3%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	0.4%	0.0%	1.0%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.0%	0.0%	0.0%
Compostable/Soiled	3.2%	0.1%	6.3%	Disposable Diapers	0.0%	0.0%	0.1%
Paper/Other Materials	3.8%	0.9%	6.6%	Animal By-Products	0.1%	0.0%	0.2%
Other Paper	0.3%	0.0%	0.6%	Rubber Products	0.0%	0.0%	0.0%
Plastic	19.6%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	0.1%	0.0%	0.2%
HDPE Milk & Juice	0.1%	0.0%	0.2%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.1%	0.0%	0.2%	Small Appliances	1.2%	0.0%	2.9%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	0.1%	0.0%	0.1%	Ceramics/Porcelain	0.0%	0.0%	0.0%
Expanded Polystyrene	0.8%	0.1%	1.4%	Non-distinct Fines	0.4%	0.0%	0.8%
Other Rigid Packaging	0.3%	0.1%	0.5%	Misc. Organics	0.0%	0.0%	0.0%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	0.3%	0.0%	0.8%
Garbage Bags	0.3%	0.1%	0.4%	CDL Wastes	4.2%		
Other Film	15.1%	9.8%	20.3%	Dimension Lumber	0.3%	0.0%	0.7%
Plastic Products	1.0%	0.0%	2.2%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	1.7%	0.5%	3.0%	Treated Wood	0.7%	0.0%	1.6%
Glass	0.3%			Contaminated Wood	0.2%	0.0%	0.4%
Clear Beverage	0.2%	0.0%	0.3%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.0%	0.0%	0.0%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.0%	0.0%	0.0%	Fiberglass Insulation	0.1%	0.0%	0.3%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	1.1%	0.0%	2.8%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.1%	0.0%	0.2%	Other Construction Debris	0.0%	0.0%	0.0%
Metal	5.1%			Sand/Soil/Dirt	1.8%	0.0%	4.6%
Aluminum Cans	0.1%	0.0%	0.1%	Hazardous	0.0%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.4%	0.0%	1.0%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.6%	0.1%	1.1%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	3.1%	0.6%	5.6%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	0.9%	0.0%	1.8%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	29			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

Table 2-20 Composition by Weight: Mixed Commercial Generators
January - December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	32.5%			Organics	30.6%		
Newspaper	3.2%	2.7%	3.7%	Pallets	1.6%	0.9%	2.4%
OCC/Kraft, unwaxed	6.6%	5.6%	7.6%	Crates/Boxes	0.7%	0.3%	1.0%
OCC/Kraft, waxed	0.8%	0.4%	1.1%	Leaves and Grass	2.9%	1.9%	3.9%
Office Paper	1.5%	1.2%	1.9%	Prunings	0.7%	0.0%	1.5%
Computer Paper	0.6%	0.3%	0.8%	Food	24.6%	21.7%	27.6%
Mixed Low Grade	9.3%	8.2%	10.4%	Other Materials	9.0%		
Phone Books	0.3%	0.1%	0.5%	Textiles/Clothing	1.7%	1.2%	2.1%
Milk/Juice Polycoats	0.3%	0.2%	0.5%	Carpet/Upholstery	1.6%	0.9%	2.3%
Frozen Food Polycoats	0.1%	0.0%	0.1%	Leather	0.1%	0.0%	0.1%
Compostable/Soiled	7.0%	6.2%	7.8%	Disposable Diapers	0.4%	0.2%	0.6%
Paper/Other Materials	1.9%	1.1%	2.7%	Animal By-Products	0.4%	0.2%	0.6%
Other Paper	0.8%	0.4%	1.3%	Rubber Products	0.8%	0.1%	1.6%
Plastic	7.7%			Tires	0.1%	0.0%	0.3%
PET Pop & Liquor	0.2%	0.1%	0.2%	Ash	0.0%	0.0%	0.1%
Other PET Bottles	0.1%	0.1%	0.1%	Furniture	0.3%	0.0%	0.7%
HDPE Milk & Juice	0.2%	0.1%	0.2%	Mattresses	0.2%	0.0%	0.5%
Other HDPE Bottles	0.3%	0.2%	0.3%	Small Appliances	0.6%	0.2%	1.0%
Other Plastic Bottles	0.1%	0.0%	0.1%	A/V Equipment	0.2%	0.0%	0.4%
Jars & Tubs	0.3%	0.2%	0.3%	Ceramics/Porcelain	0.4%	0.0%	0.8%
Expanded Polystyrene	0.4%	0.3%	0.5%	Non-distinct Fines	0.9%	0.6%	1.1%
Other Rigid Packaging	0.5%	0.4%	0.6%	Misc. Organics	1.1%	0.5%	1.7%
Grocery/Bread Bags	0.5%	0.4%	0.7%	Misc. Inorganics	0.2%	0.1%	0.3%
Garbage Bags	1.4%	1.2%	1.6%	CDL Wastes	9.6%		
Other Film	2.9%	2.5%	3.3%	Dimension Lumber	1.5%	1.0%	2.1%
Plastic Products	1.0%	0.8%	1.3%	Other Untreated Wood	0.4%	0.1%	0.7%
Plastic/Other Materials		0.0%	0.0%	Treated Wood	1.2%	0.8%	1.7%
Glass	2.6%			Contaminated Wood	1.1%	0.3%	1.8%
Clear Beverage	1.2%	1.0%	1.3%	New Gypsum Scrap	0.0%	0.0%	0.1%
Green Beverage	0.5%	0.4%	0.6%	Demo Gypsum Scrap	1.6%	0.4%	2.7%
Brown Beverage	0.6%	0.4%	0.7%	Fiberglass Insulation	0.1%	0.0%	0.2%
Container Glass	0.1%	0.1%	0.2%	Rock/Concrete/Brick	0.7%	0.2%	1.3%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	0.7%	0.1%	1.3%
Other Glass	0.2%	0.1%	0.4%	Other Construction Debris	0.9%	0.4%	1.4%
Metal	6.5%			Sand/Soil/Dirt	1.3%	0.5%	2.0%
Aluminum Cans	0.4%	0.3%	0.4%	Hazardous	0.5%		
Alum. Foil/Containers	0.1%	0.0%	0.1%	Latex Paints	0.2%	0.0%	0.4%
Other Aluminum	0.1%	0.0%	0.2%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.3%	0.1%	0.6%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.1%
Tin Food Cans	0.7%	0.5%	0.9%	Oil-based Paints/Solvents	0.0%	0.0%	0.1%
Empty Aerosol Cans	0.1%	0.1%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.8%	1.8%	3.8%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	2.0%	1.3%	2.6%	Dry-Cell Batteries	0.1%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.1%	0.0%	0.2%
Sample Count	151			Other NonHazardous Chemicals	0.1%	0.0%	0.2%

3. The Self-Haul Stream

3.1 Introduction

A total of 199 self-haul loads was sampled from January to December, 1996. Descriptive data about each sub-group's samples are summarized in Table 3-1. As shown, many of the analyses are based on a very small number of samples. In turn, these calculations are subject to a relatively wide margin of error. The sampling plan was designed to provide statistically valid results for the overall self-haul substream. The more detailed composition results are provided as rough estimates only.

Table 3-1 Number, Average Size and Sum of Samples, by Self-Haul Sector
January - December 1996

	Sample Count	<i>(All weights in pounds)</i>		
		Total Sample	Average Sample	Average Net Load Weight
North	80	21,606.4	270.1	432.9
South	119	30,524.8	256.5	631.3
Spring	40	10,992.6	274.8	633.5
Summer	59	14,826.9	251.3	484.9
Fall	60	15,656.3	260.9	544.7
Winter	40	10,655.4	266.4	578.0
Automobiles	71	15,325.8	215.9	345.5
Spring	9	2,292.5	254.7	311.1
Summer	22	4,271.2	194.1	255.0
Fall	21	4,331.9	206.3	275.2
Winter	19	4,430.2	233.2	544.2
Trucks	128	36,805.5	287.5	665.8
Residential	75	20,752.6	276.7	488.5
Spring	15	3,977.5	265.2	521.3
Summer	29	7,643.7	263.6	500.0
Fall	19	5,835.2	307.1	446.3
Winter	12	3,296.2	274.7	486.7
Non-Residential	53	16,052.9	302.9	916.6
Spring	16	4,722.6	295.2	920.0
Summer	8	2,912.0	364.0	1,062.5
Fall	20	5,489.2	274.5	921.0
Winter	9	2,929.1	325.5	771.1
Overall	199	52,131.3	262.0	551.5

In the following sections, self-haul waste composition results are described. Each material accounting for more than 5% of the substream's tonnage is listed in the text introducing each composition table.

3.2 Overall Self-Haul Composition

Table 3-2 lists the composition percentages, by weight, of each material in the self-haul substream. As shown, the four most prevalent materials disposed include:

- Dimension Lumber 10.6% Mean estimate of 1996 tons: 8,920
- Treated Wood 9.9% Mean estimate of 1996 tons: 8,258
- Furniture 8.0% Mean estimate of 1996 tons: 6,706
- Asphaltic Roofing 5.0% Mean estimate of 1996 tons: 4,223

Table 3-2 Composition by Weight: Overall Self-Haul
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	7,629	9.1%			Organics	5,854	7.0%		
Newspaper	433	0.5%	0.4%	0.6%	Pallets	773	0.9%	0.6%	1.3%
OCC/Kraft, unwaxed	2,584	3.1%	2.7%	3.4%	Crates/Boxes	111	0.1%	0.1%	0.2%
OCC/Kraft, waxed	42	0.0%	0.0%	0.1%	Leaves and Grass	2,816	3.4%	2.6%	4.1%
Office Paper	235	0.3%	0.2%	0.3%	Prunings	795	0.9%	0.6%	1.3%
Computer Paper	2	0.0%	0.0%	0.0%	Food	1,359	1.6%	1.3%	1.9%
Mixed Low Grade	2,768	3.3%	2.8%	3.8%	Other Materials	20,404	24.3%		
Phone Books	136	0.2%	0.1%	0.2%	Textiles/Clothing	1,535	1.8%	1.5%	2.1%
Milk/Juice Polycoats	19	0.0%	0.0%	0.0%	Carpet/Upholstery	4,132	4.9%	4.1%	5.8%
Frozen Food Polycoats	3	0.0%	0.0%	0.0%	Leather	225	0.3%	0.2%	0.3%
Compostable/Soiled	260	0.3%	0.3%	0.4%	Disposable Diapers	105	0.1%	0.1%	0.2%
Paper/Other Materials	756	0.9%	0.6%	1.2%	Animal By-Products	73	0.1%	0.1%	0.1%
Other Paper	393	0.5%	0.2%	0.8%	Rubber Products	464	0.6%	0.5%	0.7%
Plastic	4,342	5.2%			Tires	161	0.2%	0.1%	0.3%
PET Pop & Liquor	24	0.0%	0.0%	0.0%	Ash	15	0.0%	0.0%	0.0%
Other PET Bottles	8	0.0%	0.0%	0.0%	Furniture	6,706	8.0%	6.7%	9.3%
HDPE Milk & Juice	14	0.0%	0.0%	0.0%	Mattresses	2,928	3.5%	2.6%	4.3%
Other HDPE Bottles	75	0.1%	0.1%	0.1%	Small Appliances	920	1.1%	0.8%	1.4%
Other Plastic Bottles	13	0.0%	0.0%	0.0%	A/V Equipment	1,130	1.3%	1.0%	1.7%
Jars & Tubs	25	0.0%	0.0%	0.0%	Ceramics/Porcelain	1,061	1.3%	0.9%	1.6%
Expanded Polystyrene	92	0.1%	0.1%	0.1%	Non-distinct Fines	159	0.2%	0.1%	0.2%
Other Rigid Packaging	66	0.1%	0.1%	0.1%	Misc. Organics	620	0.7%	0.5%	1.0%
Grocery/Bread Bags	72	0.1%	0.1%	0.1%	Misc. Inorganics	168	0.2%	0.1%	0.3%
Garbage Bags	141	0.2%	0.1%	0.2%	CDL Wastes	39,029	46.6%		
Other Film	395	0.5%	0.4%	0.6%	Dimension Lumber	8,920	10.6%	8.8%	12.4%
Plastic Products	1,763	2.1%	1.7%	2.5%	Other Untreated Wood	3,004	3.6%	2.5%	4.7%
Plastic/Other Materials	1,655	2.0%	1.6%	2.3%	Treated Wood	8,258	9.9%	8.2%	11.5%
Glass	1,029	1.2%			Contaminated Wood	3,027	3.6%	2.6%	4.6%
Clear Beverage	213	0.3%	0.2%	0.3%	New Gypsum Scrap	2,074	2.5%	1.5%	3.5%
Green Beverage	81	0.1%	0.1%	0.1%	Demo Gypsum Scrap	2,084	2.5%	1.7%	3.2%
Brown Beverage	91	0.1%	0.1%	0.1%	Fiberglass Insulation	191	0.2%	0.2%	0.3%
Container Glass	121	0.1%	0.1%	0.2%	Rock/Concrete/Brick	3,526	4.2%	3.4%	5.0%
Fluorescent Tubes	12	0.0%	0.0%	0.0%	Asphaltic Roofing	4,223	5.0%	3.5%	6.6%
Other Glass	512	0.6%	0.4%	0.8%	Other Construction Debris	2,806	3.3%	2.4%	4.3%
Metal	4,520	5.4%			Sand/Soil/Dirt	915	1.1%	0.7%	1.5%
Aluminum Cans	54	0.1%	0.0%	0.1%	Hazardous	917	1.1%		
Alum. Foil/Containers	5	0.0%	0.0%	0.0%	Latex Paints	174	0.2%	0.2%	0.3%
Other Aluminum	165	0.2%	0.1%	0.3%	Hazardous Adhesives/Glues	59	0.1%	0.1%	0.1%
Other Nonferrous	185	0.2%	0.1%	0.3%	NonHazardous Adhesives/Glues	129	0.2%	0.1%	0.2%
Tin Food Cans	89	0.1%	0.1%	0.1%	Oil-based Paints/Solvents	76	0.1%	0.1%	0.1%
Empty Aerosol Cans	14	0.0%	0.0%	0.0%	Cleaners	15	0.0%	0.0%	0.0%
Other Ferrous	2,225	2.7%	2.1%	3.2%	Pesticides/Herbicides	57	0.1%	0.0%	0.1%
Mixed Metals/Materials	1,781	2.1%	1.7%	2.5%	Dry-Cell Batteries	21	0.0%	0.0%	0.0%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	3	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	14	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	2	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	81	0.1%	0.1%	0.1%
Total Tons	83,808				Other NonHazardous Chemicals	286	0.3%	0.2%	0.4%
Sample Count	199								

3.3 Composition by Transfer Station

This section examines the composition of wastes self-hauled to the North and South Recycling and Disposal Stations (NRDS and SRDS). Figure 3-1 summarizes the results on a broad waste category level, while the following sections examine the findings in more detail.

3.3.1 North Recycling and Disposal Station

A total of 80 NRDS self-haul loads was sampled. As shown in Table 3-3, three materials account for a combined total of 28% of the tonnage.

• Treated Wood	11.6%	Mean estimate of 1996 tons:	5,518
• Dimension Lumber	11.1%	Mean estimate of 1996 tons:	5,250
• Furniture	5.1%	Mean estimate of 1996 tons:	2,434

3.3.2 South Recycling and Disposal Station

A total of 119 SRDS self-haul loads was sampled. As shown in Table 3-4, seven materials account for a combined total of 50% of the tonnage.

• Furniture	9.9%	Mean estimate of 1996 tons:	3,592
• Dimension Lumber	9.2%	Mean estimate of 1996 tons:	3,350
• Treated Wood	7.3%	Mean estimate of 1996 tons:	2,644
• Carpet/Upholstery	6.9%	Mean estimate of 1996 tons:	2,499
• Rock/Concrete/Brick	5.6%	Mean estimate of 1996 tons:	2,028
• Leaves and Grass	5.5%	Mean estimate of 1996 tons:	1,999
• Asphaltic Roofing	5.4%	Mean estimate of 1996 tons:	1,975

Figure 3-1 Overview of Self-Haul Composition Estimates, by Transfer Station
January - December 1996

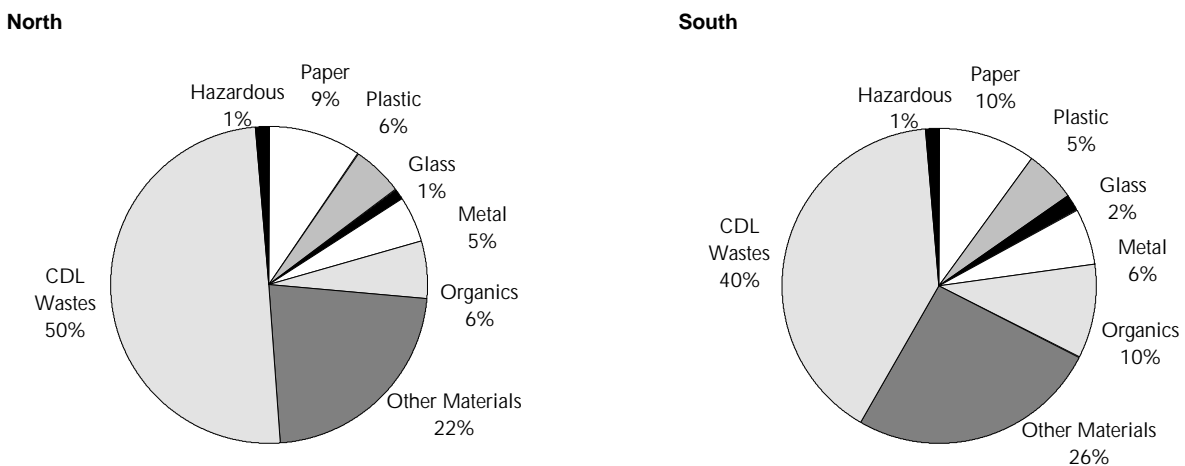


Table 3-3 Composition by Weight: Self-Haul at the NRDS
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	4,443	9.4%			Organics	2,758	5.8%		
Newspaper	191	0.4%	0.2%	0.6%	Pallets	200	0.4%	0.0%	1.0%
OCC/Kraft, unwaxed	1,394	2.9%	2.2%	3.7%	Crates/Boxes	44	0.1%	0.0%	0.2%
OCC/Kraft, waxed	15	0.0%	0.0%	0.1%	Leaves and Grass	1,057	2.2%	0.7%	3.8%
Office Paper	204	0.4%	0.0%	0.9%	Prunings	446	0.9%	0.0%	1.9%
Computer Paper	1	0.0%	0.0%	0.0%	Food	1,012	2.1%	0.3%	4.0%
Mixed Low Grade	1,580	3.3%	2.0%	4.7%	Other Materials	10,635	22.4%		
Phone Books	92	0.2%	0.0%	0.4%	Textiles/Clothing	632	1.3%	0.7%	2.0%
Milk/Juice Polycoats	19	0.0%	0.0%	0.1%	Carpet/Upholstery	1,748	3.7%	1.3%	6.0%
Frozen Food Polycoats	0	0.0%	0.0%	0.0%	Leather	121	0.3%	0.1%	0.4%
Compostable/Soiled	116	0.2%	0.1%	0.4%	Disposable Diapers	49	0.1%	0.0%	0.2%
Paper/Other Materials	541	1.1%	0.2%	2.0%	Animal By-Products	42	0.1%	0.0%	0.2%
Other Paper	289	0.6%	0.0%	1.5%	Rubber Products	489	1.0%	0.0%	2.3%
Plastic	2,604	5.5%			Tires	190	0.4%	0.0%	0.8%
PET Pop & Liquor	12	0.0%	0.0%	0.0%	Ash	0	0.0%	0.0%	0.0%
Other PET Bottles	0	0.0%	0.0%	0.0%	Furniture	2,434	5.1%	3.1%	7.2%
HDPE Milk & Juice	5	0.0%	0.0%	0.0%	Mattresses	2,168	4.6%	2.2%	6.9%
Other HDPE Bottles	20	0.0%	0.0%	0.1%	Small Appliances	603	1.3%	0.6%	1.9%
Other Plastic Bottles	3	0.0%	0.0%	0.0%	A/V Equipment	670	1.4%	0.4%	2.4%
Jars & Tubs	11	0.0%	0.0%	0.0%	Ceramics/Porcelain	809	1.7%	0.7%	2.7%
Expanded Polystyrene	49	0.1%	0.1%	0.1%	Non-distinct Fines	83	0.2%	0.1%	0.3%
Other Rigid Packaging	54	0.1%	0.0%	0.2%	Misc. Organics	520	1.1%	0.2%	2.0%
Grocery/Bread Bags	27	0.1%	0.0%	0.1%	Misc. Inorganics	76	0.2%	0.0%	0.3%
Garbage Bags	49	0.1%	0.1%	0.1%	CDL Wastes	23,681	49.9%		
Other Film	192	0.4%	0.2%	0.6%	Dimension Lumber	5,250	11.1%	6.5%	15.6%
Plastic Products	947	2.0%	1.1%	2.9%	Other Untreated Wood	2,182	4.6%	1.9%	7.3%
Plastic/Other Materials	1,235	2.6%	1.3%	3.9%	Treated Wood	5,518	11.6%	7.7%	15.5%
Glass	482	1.0%			Contaminated Wood	2,133	4.5%	1.4%	7.6%
Clear Beverage	57	0.1%	0.1%	0.2%	New Gypsum Scrap	1,140	2.4%	0.1%	4.7%
Green Beverage	37	0.1%	0.0%	0.1%	Demo Gypsum Scrap	1,106	2.3%	0.6%	4.1%
Brown Beverage	51	0.1%	0.0%	0.2%	Fiberglass Insulation	106	0.2%	0.1%	0.4%
Container Glass	86	0.2%	0.0%	0.4%	Rock/Concrete/Brick	2,174	4.6%	1.8%	7.3%
Fluorescent Tubes	3	0.0%	0.0%	0.0%	Asphaltic Roofing	2,075	4.4%	1.2%	7.5%
Other Glass	248	0.5%	0.1%	1.0%	Other Construction Debris	1,809	3.8%	1.6%	6.0%
Metal	2,261	4.8%			Sand/Soil/Dirt	189	0.4%	0.0%	0.8%
Aluminum Cans	18	0.0%	0.0%	0.1%	Hazardous	638	1.3%		
Alum. Foil/Containers	3	0.0%	0.0%	0.0%	Latex Paints	174	0.4%	0.0%	0.7%
Other Aluminum	88	0.2%	0.1%	0.3%	Hazardous Adhesives/Glues	62	0.1%	0.0%	0.2%
Other Nonferrous	30	0.1%	0.0%	0.1%	NonHazardous Adhesives/Glues	26	0.1%	0.0%	0.1%
Tin Food Cans	42	0.1%	0.0%	0.1%	Oil-based Paints/Solvents	59	0.1%	0.0%	0.2%
Empty Aerosol Cans	4	0.0%	0.0%	0.0%	Cleaners	16	0.0%	0.0%	0.1%
Other Ferrous	1,279	2.7%	1.4%	4.0%	Pesticides/Herbicides	19	0.0%	0.0%	0.1%
Mixed Metals/Materials	797	1.7%	0.8%	2.5%	Dry-Cell Batteries	13	0.0%	0.0%	0.1%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	5	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	0	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	0	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	98	0.2%	0.0%	0.5%
Total Tons	47,501				Other NonHazardous Chemicals	167	0.4%	0.1%	0.6%
Sample Count	80								

Table 3-4 Composition by Weight: Self-Haul at the SRDS
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	3,632	10.0%			Organics	3,588	9.9%		
Newspaper	311	0.9%	0.5%	1.3%	Pallets	483	1.3%	0.4%	2.2%
OCC/Kraft, unwaxed	1,169	3.2%	2.4%	4.1%	Crates/Boxes	75	0.2%	0.0%	0.4%
OCC/Kraft, waxed	20	0.1%	0.0%	0.1%	Leaves and Grass	1,999	5.5%	3.0%	8.0%
Office Paper	110	0.3%	0.1%	0.5%	Prunings	345	1.0%	0.2%	1.7%
Computer Paper	1	0.0%	0.0%	0.0%	Food	686	1.9%	1.1%	2.7%
Mixed Low Grade	1,470	4.0%	2.7%	5.4%	Other Materials	9,374	25.8%		
Phone Books	40	0.1%	0.0%	0.2%	Textiles/Clothing	973	2.7%	1.7%	3.6%
Milk/Juice Polycoats	6	0.0%	0.0%	0.0%	Carpet/Upholstery	2,499	6.9%	4.2%	9.6%
Frozen Food Polycoats	3	0.0%	0.0%	0.0%	Leather	90	0.2%	0.0%	0.5%
Compostable/Soiled	174	0.5%	0.3%	0.7%	Disposable Diapers	69	0.2%	0.0%	0.3%
Paper/Other Materials	253	0.7%	0.3%	1.0%	Animal By-Products	47	0.1%	0.0%	0.2%
Other Paper	76	0.2%	0.0%	0.4%	Rubber Products	144	0.4%	0.2%	0.6%
Plastic	1,943	5.4%			Tires	3	0.0%	0.0%	0.0%
PET Pop & Liquor	14	0.0%	0.0%	0.1%	Ash	13	0.0%	0.0%	0.1%
Other PET Bottles	8	0.0%	0.0%	0.0%	Furniture	3,592	9.9%	6.3%	13.5%
HDPE Milk & Juice	10	0.0%	0.0%	0.0%	Mattresses	453	1.2%	0.5%	2.0%
Other HDPE Bottles	61	0.2%	0.1%	0.2%	Small Appliances	274	0.8%	0.4%	1.1%
Other Plastic Bottles	12	0.0%	0.0%	0.1%	A/V Equipment	560	1.5%	0.6%	2.5%
Jars & Tubs	13	0.0%	0.0%	0.1%	Ceramics/Porcelain	477	1.3%	0.1%	2.5%
Expanded Polystyrene	74	0.2%	0.1%	0.3%	Non-distinct Fines	67	0.2%	0.1%	0.3%
Other Rigid Packaging	22	0.1%	0.0%	0.1%	Misc. Organics	36	0.1%	0.0%	0.2%
Grocery/Bread Bags	52	0.1%	0.1%	0.2%	Misc. Inorganics	77	0.2%	0.0%	0.5%
Garbage Bags	110	0.3%	0.2%	0.4%	CDL Wastes	14,599	40.2%		
Other Film	255	0.7%	0.4%	1.0%	Dimension Lumber	3,350	9.2%	6.7%	11.8%
Plastic Products	759	2.1%	1.5%	2.7%	Other Untreated Wood	610	1.7%	0.2%	3.2%
Plastic/Other Materials	552	1.5%	0.8%	2.3%	Treated Wood	2,644	7.3%	4.5%	10.0%
Glass	542	1.5%			Contaminated Wood	658	1.8%	1.2%	2.4%
Clear Beverage	186	0.5%	0.2%	0.8%	New Gypsum Scrap	815	2.2%	0.6%	3.9%
Green Beverage	53	0.1%	0.1%	0.2%	Demo Gypsum Scrap	768	2.1%	0.9%	3.3%
Brown Beverage	44	0.1%	0.0%	0.2%	Fiberglass Insulation	80	0.2%	0.1%	0.4%
Container Glass	25	0.1%	0.0%	0.1%	Rock/Concrete/Brick	2,028	5.6%	2.8%	8.4%
Fluorescent Tubes	16	0.0%	0.0%	0.1%	Asphaltic Roofing	1,975	5.4%	1.9%	9.0%
Other Glass	218	0.6%	0.3%	0.9%	Other Construction Debris	834	2.3%	0.9%	3.7%
Metal	2,142	5.9%			Sand/Soil/Dirt	837	2.3%	0.3%	4.3%
Aluminum Cans	39	0.1%	0.0%	0.2%	Hazardous	485	1.3%		
Alum. Foil/Containers	2	0.0%	0.0%	0.0%	Latex Paints	63	0.2%	0.0%	0.3%
Other Aluminum	68	0.2%	0.0%	0.3%	Hazardous Adhesives/Glues	18	0.1%	0.0%	0.1%
Other Nonferrous	150	0.4%	0.1%	0.7%	NonHazardous Adhesives/Glues	126	0.3%	0.0%	0.7%
Tin Food Cans	51	0.1%	0.1%	0.2%	Oil-based Paints/Solvents	47	0.1%	0.0%	0.2%
Empty Aerosol Cans	16	0.0%	0.0%	0.1%	Cleaners	0	0.0%	0.0%	0.0%
Other Ferrous	913	2.5%	1.7%	3.3%	Pesticides/Herbicides	35	0.1%	0.0%	0.2%
Mixed Metals/Materials	904	2.5%	1.7%	3.3%	Dry-Cell Batteries	14	0.0%	0.0%	0.1%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	0	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	12	0.0%	0.0%	0.1%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	2	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	11	0.0%	0.0%	0.1%
Total Tons	36,307				Other NonHazardous Chemicals	157	0.4%	0.1%	0.7%
Sample Count	119								

3.4 Composition by Season

As shown in Figure 3-2, CDL debris accounts for a substantial portion of the self-haul substream throughout the year. CDL disposal appears to reach a peak of 50% in the summer months and drops to 39% in the winter.

3.4.1 Spring

During the spring (March - May, 1996), 40 self-haul loads were sampled. As shown in Table 3-5, five materials account for a combined total of 40% of the tonnage.

- Dimension Lumber 12.6%
- Asphaltic Roofing 9.1%
- Treated Wood 6.7%
- Furniture 6.1%
- Carpet/Upholstery 5.3%

3.4.2 Summer

During the summer (June - August, 1996), 59 self-haul loads were sampled. As shown in Table 3-6, five materials account for a combined total of 44% of the tonnage.

- Dimension Lumber 13.9%
- Treated Wood 10.9%
- Asphaltic Roofing 6.9%
- Leaves and Grass 6.2%
- Carpet/Upholstery 6.1%

3.4.3 Fall

During the fall (September - November, 1996), 60 self-haul loads were sampled. As shown in Table 3-7, four materials account for a combined total of 36% of the tonnage.

- Furniture 13.2%
- Treated Wood 11.8%
- Leaves and Grass 5.8%
- Rock/Concrete/Brick 5.5%

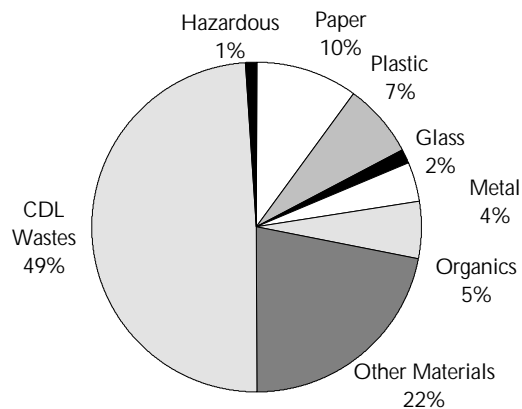
3.4.4 Winter

During the winter (January, February and December, 1996), 40 self-haul loads were sampled. As shown in Table 3-8, seven materials account for a combined total of 48% of the tonnage.

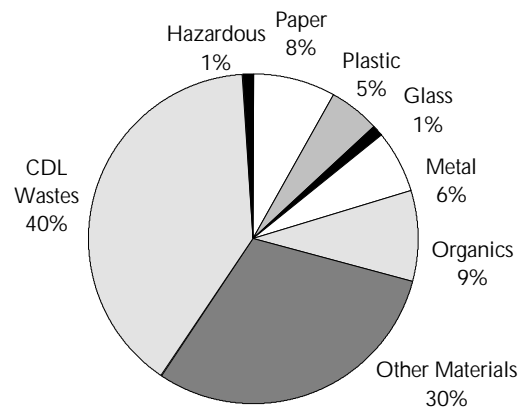
- Rock/Concrete/Brick 8.1%
- Other Untreated Wood 8.0%
- Furniture 7.7%
- New Gypsum Scrap 7.3%
- Carpet/Upholstery 6.5%
- Food 5.4%
- Treated Wood 5.0%

Figure 3-2 Overview of Self-Haul Composition Estimates, by Season

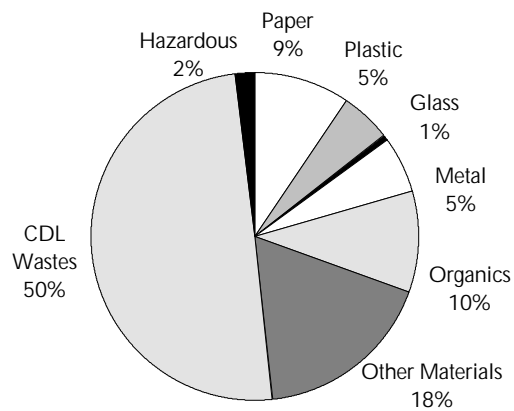
Spring



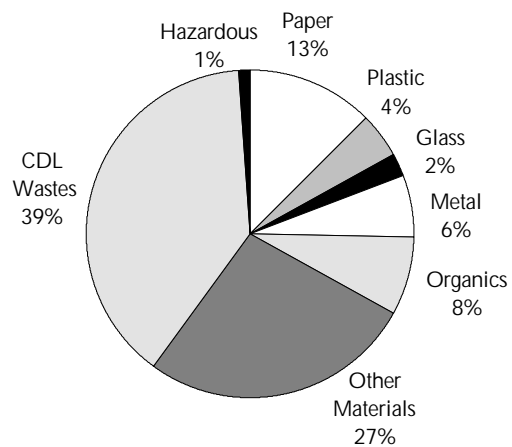
Fall



Summer



Winter



**Table 3-5 Composition by Weight: Self-Haul in Spring
March - May 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	9.9%			Organics	5.3%		
Newspaper	0.4%	0.0%	0.9%	Pallets	0.1%	0.0%	0.4%
OCC/Kraft, unwaxed	3.0%	2.1%	4.0%	Crates/Boxes	0.1%	0.0%	0.3%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	2.1%	0.0%	4.3%
Office Paper	0.2%	0.0%	0.5%	Prunings	1.7%	0.0%	3.7%
Computer Paper	0.0%	0.0%	0.0%	Food	1.2%	0.3%	2.1%
Mixed Low Grade	3.2%	1.7%	4.6%	Other Materials	22.1%		
Phone Books	0.3%	0.1%	0.6%	Textiles/Clothing	3.2%	1.5%	4.9%
Milk/Juice Polycoats	0.1%	0.0%	0.1%	Carpet/Upholstery	5.3%	1.4%	9.3%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.4%	0.0%	0.8%
Compostable/Soiled	0.4%	0.1%	0.7%	Disposable Diapers	0.1%	0.0%	0.2%
Paper/Other Materials	2.1%	0.4%	3.9%	Animal By-Products	0.2%	0.0%	0.5%
Other Paper	0.1%	0.0%	0.2%	Rubber Products	0.2%	0.0%	0.4%
Plastic	7.4%			Tires	0.2%	0.0%	0.7%
PET Pop & Liquor	0.0%	0.0%	0.1%	Ash	0.1%	0.0%	0.3%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	6.1%	2.5%	9.8%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	2.0%	0.3%	3.6%
Other HDPE Bottles	0.1%	0.0%	0.2%	Small Appliances	0.6%	0.2%	0.9%
Other Plastic Bottles	0.1%	0.0%	0.1%	A/V Equipment	1.6%	0.4%	2.7%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	1.3%	0.0%	2.7%
Expanded Polystyrene	0.1%	0.1%	0.2%	Non-distinct Fines	0.4%	0.2%	0.6%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	0.3%	0.0%	0.5%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	0.0%	0.0%	0.0%
Garbage Bags	0.2%	0.1%	0.3%	CDL Wastes	48.8%		
Other Film	0.7%	0.3%	1.0%	Dimension Lumber	12.6%	6.3%	18.9%
Plastic Products	2.4%	1.2%	3.7%	Other Untreated Wood	3.6%	0.0%	7.6%
Plastic/Other Materials	3.6%	1.3%	6.0%	Treated Wood	6.7%	1.9%	11.5%
Glass	1.5%			Contaminated Wood	3.6%	0.4%	6.8%
Clear Beverage	0.5%	0.1%	0.9%	New Gypsum Scrap	3.4%	0.0%	7.0%
Green Beverage	0.1%	0.0%	0.2%	Demo Gypsum Scrap	2.2%	0.0%	4.9%
Brown Beverage	0.3%	0.0%	0.5%	Fiberglass Insulation	0.2%	0.0%	0.5%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	2.8%	0.0%	6.3%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	9.1%	1.1%	17.1%
Other Glass	0.6%	0.0%	1.3%	Other Construction Debris	3.7%	0.9%	6.6%
Metal	3.9%			Sand/Soil/Dirt	0.8%	0.1%	1.6%
Aluminum Cans	0.0%	0.0%	0.1%	Hazardous	1.2%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.4%	0.0%	0.8%
Other Aluminum	0.2%	0.0%	0.4%	Hazardous Adhesives/Glues	0.1%	0.0%	0.2%
Other Nonferrous	0.5%	0.0%	1.3%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.0%	0.0%	0.0%	Oil-based Paints/Solvents	0.1%	0.0%	0.3%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	1.3%	0.7%	1.9%	Pesticides/Herbicides	0.0%	0.0%	0.1%
Mixed Metals/Materials	1.8%	0.8%	2.8%	Dry-Cell Batteries	0.1%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.1%	0.0%	0.2%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.1%
Sample Count	40			Other NonHazardous Chemicals	0.4%	0.1%	0.7%

Table 3-6 Composition by Weight: Self-Haul in Summer
June - August 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	9.3%			Organics	10.1%		
Newspaper	0.6%	0.3%	1.0%	Pallets	0.5%	0.0%	1.3%
OCC/Kraft, unwaxed	2.6%	1.4%	3.9%	Crates/Boxes	0.3%	0.0%	0.6%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	6.2%	2.8%	9.5%
Office Paper	0.2%	0.1%	0.3%	Prunings	1.1%	0.0%	2.4%
Computer Paper	0.0%	0.0%	0.0%	Food	2.0%	0.7%	3.2%
Mixed Low Grade	4.4%	2.0%	6.7%	Other Materials	17.8%		
Phone Books	0.1%	0.0%	0.1%	Textiles/Clothing	1.5%	0.9%	2.1%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	6.1%	2.5%	9.6%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.3%	0.0%	0.6%
Compostable/Soiled	0.5%	0.2%	0.8%	Disposable Diapers	0.2%	0.0%	0.4%
Paper/Other Materials	0.8%	0.2%	1.4%	Animal By-Products	0.1%	0.0%	0.3%
Other Paper	0.1%	0.0%	0.3%	Rubber Products	0.3%	0.0%	0.6%
Plastic	5.0%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.1%	Furniture	3.8%	1.1%	6.4%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	2.8%	0.8%	4.9%
Other HDPE Bottles	0.1%	0.0%	0.1%	Small Appliances	0.7%	0.3%	1.2%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	1.0%	0.1%	2.0%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	0.3%	0.0%	0.6%
Expanded Polystyrene	0.2%	0.0%	0.4%	Non-distinct Fines	0.2%	0.1%	0.2%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	0.3%	0.0%	0.6%
Grocery/Bread Bags	0.1%	0.1%	0.2%	Misc. Inorganics	0.2%	0.0%	0.5%
Garbage Bags	0.3%	0.1%	0.5%	CDL Wastes	49.7%		
Other Film	0.6%	0.1%	1.0%	Dimension Lumber	13.9%	8.1%	19.6%
Plastic Products	2.4%	1.5%	3.3%	Other Untreated Wood	1.2%	0.0%	2.5%
Plastic/Other Materials	1.1%	0.7%	1.5%	Treated Wood	10.9%	6.0%	15.7%
Glass	0.7%			Contaminated Wood	4.7%	1.2%	8.1%
Clear Beverage	0.3%	0.1%	0.6%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.1%	0.0%	0.2%	Demo Gypsum Scrap	2.5%	0.4%	4.5%
Brown Beverage	0.0%	0.0%	0.1%	Fiberglass Insulation	0.3%	0.0%	0.5%
Container Glass	0.1%	0.0%	0.1%	Rock/Concrete/Brick	4.5%	1.8%	7.1%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	6.9%	1.8%	12.0%
Other Glass	0.2%	0.1%	0.3%	Other Construction Debris	3.2%	0.5%	5.8%
Metal	5.4%			Sand/Soil/Dirt	1.8%	0.0%	4.0%
Aluminum Cans	0.1%	0.0%	0.1%	Hazardous	1.9%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.3%	0.0%	0.7%
Other Aluminum	0.0%	0.0%	0.1%	Hazardous Adhesives/Glues	0.1%	0.0%	0.2%
Other Nonferrous	0.1%	0.0%	0.2%	NonHazardous Adhesives/Glues	0.1%	0.0%	0.2%
Tin Food Cans	0.1%	0.0%	0.1%	Oil-based Paints/Solvents	0.2%	0.0%	0.4%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.1%
Other Ferrous	2.9%	1.2%	4.7%	Pesticides/Herbicides	0.2%	0.0%	0.4%
Mixed Metals/Materials	2.2%	0.9%	3.4%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.2%	0.0%	0.6%
Sample Count	59			Other NonHazardous Chemicals	0.8%	0.1%	1.4%

Table 3-7 Composition by Weight: Self-Haul in Fall

September - November 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	8.1%			Organics	8.7%		
Newspaper	0.4%	0.1%	0.7%	Pallets	2.0%	0.4%	3.7%
OCC/Kraft, unwaxed	2.8%	2.0%	3.5%	Crates/Boxes	0.2%	0.0%	0.4%
OCC/Kraft, waxed	0.1%	0.0%	0.3%	Leaves and Grass	5.8%	1.9%	9.7%
Office Paper	0.3%	0.0%	0.6%	Prunings	0.5%	0.1%	0.9%
Computer Paper	0.0%	0.0%	0.0%	Food	0.2%	0.1%	0.4%
Mixed Low Grade	3.0%	1.7%	4.4%	Other Materials	30.4%		
Phone Books	0.0%	0.0%	0.1%	Textiles/Clothing	1.3%	0.5%	2.2%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	4.6%	1.5%	7.7%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.1%	0.0%	0.3%
Compostable/Soiled	0.1%	0.0%	0.2%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	0.3%	0.1%	0.6%	Animal By-Products	0.1%	0.0%	0.2%
Other Paper	1.0%	0.0%	2.3%	Rubber Products	0.5%	0.2%	0.8%
Plastic	5.1%			Tires	0.4%	0.0%	0.8%
PET Pop & Liquor	0.0%	0.0%	0.0%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	13.2%	7.4%	19.0%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	3.3%	0.8%	5.8%
Other HDPE Bottles	0.1%	0.0%	0.2%	Small Appliances	1.3%	0.5%	2.0%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	1.9%	0.3%	3.5%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	2.3%	0.0%	4.6%
Expanded Polystyrene	0.1%	0.0%	0.2%	Non-distinct Fines	0.1%	0.0%	0.2%
Other Rigid Packaging	0.1%	0.0%	0.2%	Misc. Organics	0.7%	0.0%	1.7%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	0.4%	0.0%	0.9%
Garbage Bags	0.1%	0.1%	0.2%	CDL Wastes	39.4%		
Other Film	0.2%	0.1%	0.3%	Dimension Lumber	8.4%	5.4%	11.5%
Plastic Products	1.8%	0.9%	2.8%	Other Untreated Wood	0.5%	0.1%	0.8%
Plastic/Other Materials	2.5%	1.0%	3.9%	Treated Wood	11.8%	7.0%	16.7%
Glass	1.0%			Contaminated Wood	2.7%	0.7%	4.7%
Clear Beverage	0.0%	0.0%	0.1%	New Gypsum Scrap	0.4%	0.0%	0.8%
Green Beverage	0.0%	0.0%	0.1%	Demo Gypsum Scrap	1.8%	0.5%	3.1%
Brown Beverage	0.1%	0.0%	0.1%	Fiberglass Insulation	0.1%	0.0%	0.2%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	5.5%	1.4%	9.6%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	3.5%	0.2%	6.8%
Other Glass	0.8%	0.3%	1.4%	Other Construction Debris	2.2%	0.0%	4.5%
Metal	6.1%			Sand/Soil/Dirt	2.5%	0.0%	5.8%
Aluminum Cans	0.0%	0.0%	0.0%	Hazardous	1.1%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.3%	0.0%	0.6%
Other Aluminum	0.3%	0.1%	0.4%	Hazardous Adhesives/Glues	0.1%	0.0%	0.2%
Other Nonferrous	0.3%	0.1%	0.5%	NonHazardous Adhesives/Glues	0.4%	0.0%	0.9%
Tin Food Cans	0.1%	0.0%	0.2%	Oil-based Paints/Solvents	0.1%	0.0%	0.2%
Empty Aerosol Cans	0.1%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	3.2%	1.8%	4.6%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	2.2%	1.1%	3.3%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.1%
				Other NonHazardous Chemicals	0.2%	0.0%	0.4%
Sample Count	60						

Table 3-8 Composition by Weight: Self-Haul in Winter
January, February and December 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	12.6%			Organics	7.7%		
Newspaper	1.3%	0.4%	2.3%	Pallets	0.8%	0.0%	1.8%
OCC/Kraft, unwaxed	4.3%	2.7%	6.0%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.0%	0.0%	0.1%	Leaves and Grass	0.9%	0.0%	2.0%
Office Paper	0.8%	0.0%	1.8%	Prunings	0.5%	0.0%	1.1%
Computer Paper	0.0%	0.0%	0.0%	Food	5.4%	1.5%	9.3%
Mixed Low Grade	4.5%	2.1%	7.0%	Other Materials	27.1%		
Phone Books	0.2%	0.0%	0.5%	Textiles/Clothing	3.1%	1.1%	5.0%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	6.5%	1.5%	11.4%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.1%	0.0%	0.3%
Compostable/Soiled	0.6%	0.3%	0.9%	Disposable Diapers	0.4%	0.0%	0.9%
Paper/Other Materials	0.6%	0.2%	0.9%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.0%	0.0%	0.1%	Rubber Products	1.8%	0.0%	4.2%
Plastic	4.3%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	7.7%	3.3%	12.1%
HDPE Milk & Juice	0.0%	0.0%	0.1%	Mattresses	1.9%	0.3%	3.6%
Other HDPE Bottles	0.2%	0.0%	0.3%	Small Appliances	1.3%	0.3%	2.2%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	1.4%	0.0%	3.1%
Jars & Tubs	0.1%	0.0%	0.1%	Ceramics/Porcelain	2.1%	0.5%	3.6%
Expanded Polystyrene	0.2%	0.1%	0.3%	Non-distinct Fines	0.1%	0.0%	0.2%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	0.8%	0.0%	1.7%
Grocery/Bread Bags	0.2%	0.1%	0.3%	Misc. Inorganics	0.0%	0.0%	0.1%
Garbage Bags	0.3%	0.1%	0.4%	CDL Wastes	38.9%		
Other Film	1.1%	0.5%	1.6%	Dimension Lumber	4.2%	1.5%	6.9%
Plastic Products	1.5%	0.6%	2.4%	Other Untreated Wood	8.0%	3.0%	13.0%
Plastic/Other Materials	0.7%	0.4%	1.1%	Treated Wood	5.0%	2.9%	7.1%
Glass	2.3%			Contaminated Wood	0.1%	0.0%	0.3%
Clear Beverage	0.6%	0.0%	1.2%	New Gypsum Scrap	7.3%	2.3%	12.2%
Green Beverage	0.3%	0.1%	0.5%	Demo Gypsum Scrap	2.3%	0.1%	4.6%
Brown Beverage	0.2%	0.1%	0.3%	Fiberglass Insulation	0.4%	0.0%	0.7%
Container Glass	0.5%	0.0%	1.0%	Rock/Concrete/Brick	8.1%	2.2%	13.9%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.3%	0.0%	0.9%
Other Glass	0.7%	0.1%	1.4%	Other Construction Debris	2.9%	1.4%	4.3%
Metal	6.0%			Sand/Soil/Dirt	0.3%	0.0%	0.8%
Aluminum Cans	0.2%	0.1%	0.4%	Hazardous	1.0%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.1%	0.0%	0.2%
Other Aluminum	0.3%	0.0%	0.6%	Hazardous Adhesives/Glues	0.0%	0.0%	0.1%
Other Nonferrous	0.3%	0.0%	0.7%	NonHazardous Adhesives/Glues	0.5%	0.0%	1.1%
Tin Food Cans	0.3%	0.1%	0.4%	Oil-based Paints/Solvents	0.1%	0.0%	0.1%
Empty Aerosol Cans	0.0%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.5%	1.4%	3.7%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	2.4%	1.1%	3.8%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.1%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.1%	0.0%	0.2%
				Other NonHazardous Chemicals	0.2%	0.0%	0.5%
Sample Count	40						

3.5 Composition by Vehicle Type

Wastes are self-hauled to Seattle’s transfer stations in a variety of vehicles, which are categorized into two groups (automobiles and trucks) for the analysis. Vehicles with a passenger vehicle license plate are included in the “automobile” category; all others (mainly pick-ups and vans) are in the “truck” category. Figure 3-3 provides an overview of these sectors’ waste.

3.5.1 Automobiles

A total of 71 automobile loads was sampled. As shown in Table 3-9, six materials account for a combined total of 43% of the tonnage.

• Rock/Concrete/Brick	9.0%	Mean estimate of 1996 tons:	1,237
• Dimension Lumber	8.1%	Mean estimate of 1996 tons:	1,119
• Treated Wood	8.3%	Mean estimate of 1996 tons:	1,147
• Leaves and Grass	6.0%	Mean estimate of 1996 tons:	824
• Carpet/Upholstery	5.8%	Mean estimate of 1996 tons:	800
• Mixed Low Grade Paper	5.4%	Mean estimate of 1996 tons:	737

3.5.2 Trucks

A total of 128 truck loads was sampled. As shown in Table 3-10, five materials account for a combined total of 41% of the tonnage.

• Dimension Lumber	10.8%	Mean estimate of 1996 tons:	7,534
• Furniture	9.7%	Mean estimate of 1996 tons:	6,813
• Treated Wood	9.4%	Mean estimate of 1996 tons:	6,579
• Carpet/Upholstery	5.5%	Mean estimate of 1996 tons:	3,818
• Asphaltic Roofing	5.3%	Mean estimate of 1996 tons:	3,741

Figure 3-3 Overview of Self-Haul Composition Estimates, by Vehicle Type
January - December 1996

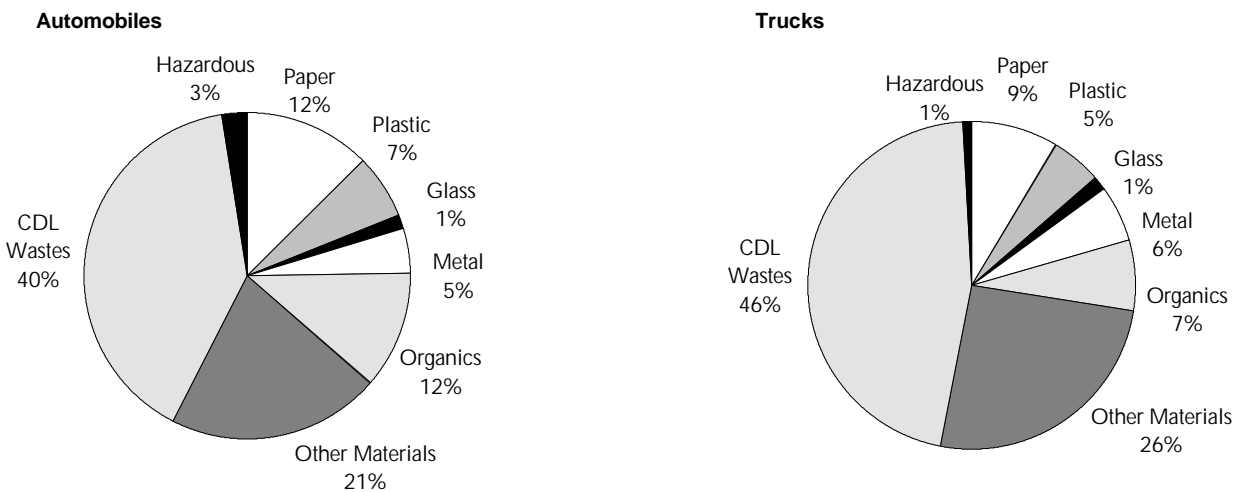


Table 3-9 Composition by Weight: Self-Haul Automobiles
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	1,704	12.4%			Organics	1,590	11.5%		
Newspaper	151	1.1%	0.4%	1.8%	Pallets	48	0.3%	0.0%	0.9%
OCC/Kraft, unwaxed	414	3.0%	2.0%	4.1%	Crates/Boxes	28	0.2%	0.0%	0.4%
OCC/Kraft, waxed	0	0.0%	0.0%	0.0%	Leaves and Grass	824	6.0%	1.7%	10.3%
Office Paper	113	0.8%	0.0%	1.6%	Prunings	142	1.0%	0.0%	2.3%
Computer Paper	0	0.0%	0.0%	0.0%	Food	548	4.0%	1.2%	6.7%
Mixed Low Grade	737	5.4%	3.4%	7.3%	Other Materials	2,929	21.3%		
Phone Books	15	0.1%	0.0%	0.2%	Textiles/Clothing	339	2.5%	1.2%	3.7%
Milk/Juice Polycoats	9	0.1%	0.0%	0.1%	Carpet/Upholstery	800	5.8%	1.7%	9.9%
Frozen Food Polycoats	1	0.0%	0.0%	0.0%	Leather	21	0.2%	0.0%	0.3%
Compostable/Soiled	77	0.6%	0.3%	0.8%	Disposable Diapers	36	0.3%	0.0%	0.5%
Paper/Other Materials	151	1.1%	0.5%	1.7%	Animal By-Products	28	0.2%	0.0%	0.4%
Other Paper	35	0.3%	0.0%	0.5%	Rubber Products	220	1.6%	0.0%	3.3%
Plastic	896	6.5%			Tires	49	0.4%	0.0%	0.7%
PET Pop & Liquor	6	0.0%	0.0%	0.1%	Ash	0	0.0%	0.0%	0.0%
Other PET Bottles	3	0.0%	0.0%	0.0%	Furniture	492	3.6%	1.1%	6.0%
HDPE Milk & Juice	4	0.0%	0.0%	0.0%	Mattresses	121	0.9%	0.0%	1.7%
Other HDPE Bottles	22	0.2%	0.1%	0.3%	Small Appliances	102	0.7%	0.4%	1.1%
Other Plastic Bottles	5	0.0%	0.0%	0.1%	A/V Equipment	289	2.1%	0.6%	3.6%
Jars & Tubs	4	0.0%	0.0%	0.0%	Ceramics/Porcelain	378	2.7%	1.2%	4.3%
Expanded Polystyrene	52	0.4%	0.2%	0.6%	Non-distinct Fines	17	0.1%	0.0%	0.2%
Other Rigid Packaging	20	0.1%	0.0%	0.3%	Misc. Organics	27	0.2%	0.0%	0.3%
Grocery/Bread Bags	21	0.2%	0.1%	0.2%	Misc. Inorganics	13	0.1%	0.0%	0.2%
Garbage Bags	45	0.3%	0.2%	0.4%	CDL Wastes	5,502	39.9%		
Other Film	127	0.9%	0.4%	1.4%	Dimension Lumber	1,119	8.1%	4.8%	11.4%
Plastic Products	228	1.7%	1.0%	2.3%	Other Untreated Wood	235	1.7%	0.4%	3.0%
Plastic/Other Materials	359	2.6%	1.0%	4.2%	Treated Wood	1,147	8.3%	5.3%	11.3%
Glass	176	1.3%			Contaminated Wood	235	1.7%	0.7%	2.7%
Clear Beverage	75	0.5%	0.1%	1.0%	New Gypsum Scrap	228	1.7%	0.0%	3.4%
Green Beverage	23	0.2%	0.0%	0.3%	Demo Gypsum Scrap	135	1.0%	0.0%	1.9%
Brown Beverage	18	0.1%	0.0%	0.2%	Fiberglass Insulation	25	0.2%	0.0%	0.3%
Container Glass	8	0.1%	0.0%	0.1%	Rock/Concrete/Brick	1,237	9.0%	4.1%	13.9%
Fluorescent Tubes	11	0.1%	0.0%	0.1%	Asphaltic Roofing	574	4.2%	0.0%	8.8%
Other Glass	41	0.3%	0.1%	0.4%	Other Construction Debris	265	1.9%	0.6%	3.2%
Metal	636	4.6%			Sand/Soil/Dirt	305	2.2%	0.1%	4.3%
Aluminum Cans	14	0.1%	0.0%	0.2%	Hazardous	343	2.5%		
Alum. Foil/Containers	1	0.0%	0.0%	0.0%	Latex Paints	82	0.6%	0.1%	1.1%
Other Aluminum	16	0.1%	0.0%	0.2%	Hazardous Adhesives/Glues	26	0.2%	0.1%	0.3%
Other Nonferrous	30	0.2%	0.0%	0.5%	NonHazardous Adhesives/Glues	53	0.4%	0.0%	0.8%
Tin Food Cans	19	0.1%	0.1%	0.2%	Oil-based Paints/Solvents	43	0.3%	0.1%	0.6%
Empty Aerosol Cans	9	0.1%	0.0%	0.1%	Cleaners	3	0.0%	0.0%	0.1%
Other Ferrous	328	2.4%	1.4%	3.4%	Pesticides/Herbicides	7	0.1%	0.0%	0.1%
Mixed Metals/Materials	219	1.6%	0.9%	2.3%	Dry-Cell Batteries	9	0.1%	0.0%	0.1%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	2	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	0	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	0	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	36	0.3%	0.0%	0.6%
Total Tons	13,777				Other NonHazardous Chemicals	82	0.6%	0.2%	1.0%
Sample Count	71								

Table 3-10 Composition by Weight: Self-Haul Trucks
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	6,049	8.6%			Organics	4,763	6.8%		
Newspaper	343	0.5%	0.3%	0.7%	Pallets	844	1.2%	0.4%	2.0%
OCC/Kraft, unwaxed	2,199	3.1%	2.5%	3.8%	Crates/Boxes	100	0.1%	0.0%	0.3%
OCC/Kraft, waxed	45	0.1%	0.0%	0.1%	Leaves and Grass	2,368	3.4%	2.0%	4.8%
Office Paper	113	0.2%	0.1%	0.2%	Prunings	637	0.9%	0.3%	1.5%
Computer Paper	2	0.0%	0.0%	0.0%	Food	814	1.2%	0.6%	1.7%
Mixed Low Grade	2,159	3.1%	2.0%	4.2%	Other Materials	18,000	25.7%		
Phone Books	110	0.2%	0.0%	0.3%	Textiles/Clothing	1,387	2.0%	1.3%	2.7%
Milk/Juice Polycoats	7	0.0%	0.0%	0.0%	Carpet/Upholstery	3,818	5.5%	3.4%	7.5%
Frozen Food Polycoats	3	0.0%	0.0%	0.0%	Leather	204	0.3%	0.1%	0.5%
Compostable/Soiled	216	0.3%	0.2%	0.5%	Disposable Diapers	78	0.1%	0.0%	0.2%
Paper/Other Materials	554	0.8%	0.3%	1.3%	Animal By-Products	52	0.1%	0.0%	0.2%
Other Paper	297	0.4%	0.0%	1.0%	Rubber Products	189	0.3%	0.1%	0.4%
Plastic	3,465	4.9%			Tires	66	0.1%	0.0%	0.2%
PET Pop & Liquor	19	0.0%	0.0%	0.0%	Ash	20	0.0%	0.0%	0.1%
Other PET Bottles	8	0.0%	0.0%	0.0%	Furniture	6,813	9.7%	6.7%	12.7%
HDPE Milk & Juice	13	0.0%	0.0%	0.0%	Mattresses	2,346	3.3%	1.9%	4.8%
Other HDPE Bottles	69	0.1%	0.1%	0.1%	Small Appliances	743	1.1%	0.6%	1.5%
Other Plastic Bottles	11	0.0%	0.0%	0.0%	A/V Equipment	863	1.2%	0.5%	2.0%
Jars & Tubs	22	0.0%	0.0%	0.1%	Ceramics/Porcelain	665	0.9%	0.0%	1.9%
Expanded Polystyrene	51	0.1%	0.0%	0.1%	Non-distinct Fines	144	0.2%	0.1%	0.3%
Other Rigid Packaging	39	0.1%	0.0%	0.1%	Misc. Organics	450	0.6%	0.1%	1.2%
Grocery/Bread Bags	62	0.1%	0.1%	0.1%	Misc. Inorganics	162	0.2%	0.0%	0.5%
Garbage Bags	122	0.2%	0.1%	0.3%	CDL Wastes	32,204	46.0%		
Other Film	305	0.4%	0.3%	0.6%	Dimension Lumber	7,534	10.8%	7.7%	13.9%
Plastic Products	1,552	2.2%	1.6%	2.9%	Other Untreated Wood	2,368	3.4%	1.4%	5.3%
Plastic/Other Materials	1,191	1.7%	1.0%	2.4%	Treated Wood	6,579	9.4%	6.4%	12.4%
Glass	911	1.3%			Contaminated Wood	2,402	3.4%	1.6%	5.3%
Clear Beverage	187	0.3%	0.1%	0.4%	New Gypsum Scrap	1,808	2.6%	0.8%	4.3%
Green Beverage	68	0.1%	0.0%	0.2%	Demo Gypsum Scrap	1,901	2.7%	1.3%	4.1%
Brown Beverage	77	0.1%	0.0%	0.2%	Fiberglass Insulation	168	0.2%	0.1%	0.4%
Container Glass	96	0.1%	0.0%	0.3%	Rock/Concrete/Brick	2,508	3.6%	1.6%	5.5%
Fluorescent Tubes	6	0.0%	0.0%	0.0%	Asphaltic Roofing	3,741	5.3%	2.4%	8.2%
Other Glass	478	0.7%	0.3%	1.0%	Other Construction Debris	2,337	3.3%	1.7%	5.0%
Metal	4,037	5.8%			Sand/Soil/Dirt	857	1.2%	0.0%	2.6%
Aluminum Cans	49	0.1%	0.0%	0.1%	Hazardous	602	0.9%		
Alum. Foil/Containers	4	0.0%	0.0%	0.0%	Latex Paints	78	0.1%	0.0%	0.2%
Other Aluminum	151	0.2%	0.1%	0.3%	Hazardous Adhesives/Glues	27	0.0%	0.0%	0.1%
Other Nonferrous	201	0.3%	0.0%	0.5%	NonHazardous Adhesives/Glues	112	0.2%	0.0%	0.4%
Tin Food Cans	78	0.1%	0.1%	0.2%	Oil-based Paints/Solvents	36	0.1%	0.0%	0.1%
Empty Aerosol Cans	9	0.0%	0.0%	0.0%	Cleaners	8	0.0%	0.0%	0.0%
Other Ferrous	1,873	2.7%	1.8%	3.6%	Pesticides/Herbicides	58	0.1%	0.0%	0.2%
Mixed Metals/Materials	1,672	2.4%	1.6%	3.2%	Dry-Cell Batteries	14	0.0%	0.0%	0.0%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	0	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	19	0.0%	0.0%	0.1%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	2	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	27	0.0%	0.0%	0.1%
Total Tons	70,031				Other NonHazardous Chemicals	222	0.3%	0.1%	0.6%
Sample Count	128								

3.6 Composition of Wastes Hauled in Automobiles, by Season

The composition of the wastes hauled in automobiles was calculated for each season. Figure 3-4 illustrates the overall results; details for each season are discussed in the following sections.

3.6.1 Spring

During the spring (March - May, 1996), nine automobile loads were sampled. As shown in Table 3-11, four materials account for a combined total of 48% of the tonnage.

- Asphaltic Roofing 18.2%
- Carpet/Upholstery 11.7%
- Plastic/Other Materials 11.2%
- Mixed Low Grade Paper 6.9%

3.6.2 Summer

During the summer (June - August, 1996), 22 automobile loads were sampled. As shown in Table 3-12, five materials account for a combined total of 41% of the tonnage.

- Dimension Lumber 13.0%
- Leaves and Grass 8.3%
- Treated Wood 8.0%
- Rock/Concrete/Brick 6.7%
- Mixed Low Grade Paper 5.1%

3.6.3 Fall

During the fall (September - November, 1996), 21 automobiles loads were sampled. As shown in Table 3-13, six materials account for a combined total of 66% of the tonnage.

- Treated Wood 12.8%
- Leaves and Grass 12.2%
- Furniture 11.2%
- Dimension Lumber 10.8%
- Rock/Concrete/Brick 10.2%
- Carpet/Upholstery 8.8%

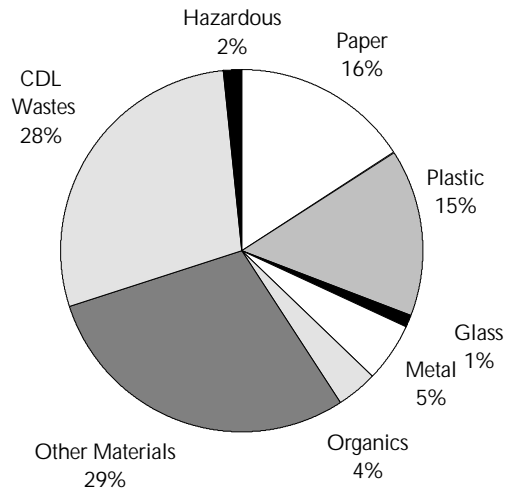
3.6.4 Winter

During the winter (January, February and December, 1996), 19 automobile loads were sampled. As shown in Table 3-14, four materials account for a combined total of 37% of the tonnage.

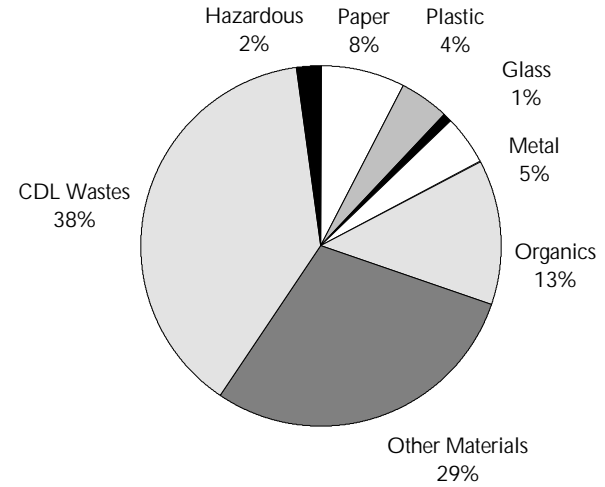
- Rock/Concrete/Brick 14.5%
- Food 8.8%
- Mixed Low Grade Paper 7.1%
- Treated Wood 6.8%

Figure 3-4 Overview of Self-Haul Automobile Composition Estimates, by Season

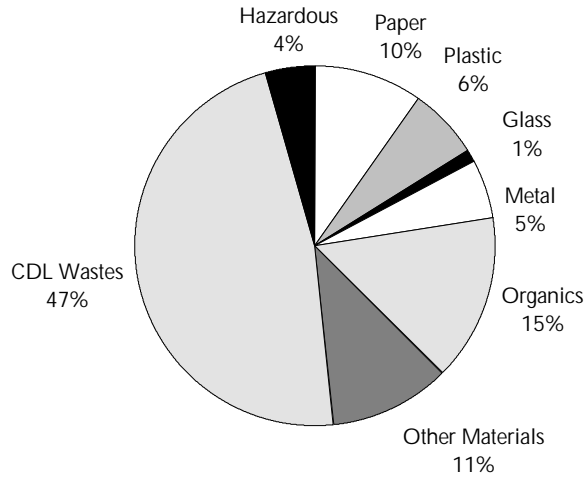
Spring



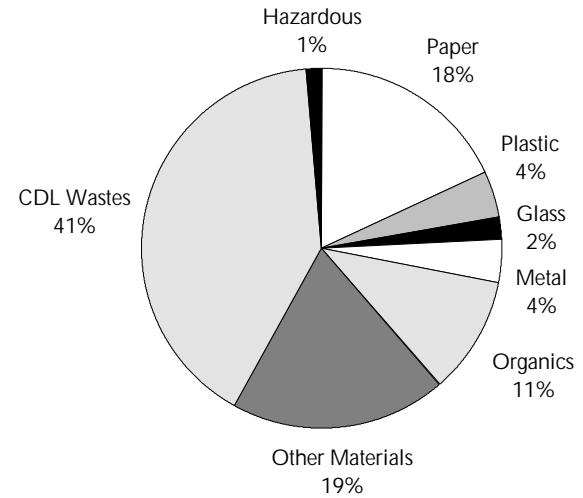
Fall



Summer



Winter



**Table 3-11 Composition by Weight: Self-Haul Automobiles in Spring
March - May 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	15.9%			Organics	3.7%		
Newspaper	0.3%	0.0%	0.7%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	2.8%	1.0%	4.6%	Crates/Boxes	0.5%	0.0%	1.1%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	0.4%	0.0%	1.0%
Office Paper	0.1%	0.0%	0.2%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.0%	0.0%	0.0%	Food	2.9%	0.0%	6.3%
Mixed Low Grade	6.9%	1.9%	11.8%	Other Materials	29.0%		
Phone Books	0.5%	0.0%	1.2%	Textiles/Clothing	4.0%	0.5%	7.5%
Milk/Juice Polycoats	0.3%	0.0%	0.7%	Carpet/Upholstery	11.7%	0.0%	28.9%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.5%	0.0%	1.2%
Compostable/Soiled	1.4%	0.0%	2.9%	Disposable Diapers	0.4%	0.0%	1.0%
Paper/Other Materials	3.4%	0.4%	6.4%	Animal By-Products	0.2%	0.0%	0.5%
Other Paper	0.3%	0.0%	0.8%	Rubber Products	0.8%	0.0%	1.6%
Plastic	15.0%			Tires	1.2%	0.0%	3.0%
PET Pop & Liquor	0.1%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	1.9%	0.0%	4.0%
HDPE Milk & Juice	0.0%	0.0%	0.1%	Mattresses	2.8%	0.0%	6.4%
Other HDPE Bottles	0.1%	0.0%	0.1%	Small Appliances	0.8%	0.0%	1.6%
Other Plastic Bottles	0.1%	0.0%	0.3%	A/V Equipment	0.9%	0.0%	2.1%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	3.7%	0.0%	9.1%
Expanded Polystyrene	0.1%	0.0%	0.2%	Non-distinct Fines	0.2%	0.0%	0.6%
Other Rigid Packaging	0.1%	0.0%	0.2%	Misc. Organics	0.1%	0.0%	0.1%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	0.0%	0.0%	0.0%
Garbage Bags	0.3%	0.0%	0.7%	CDL Wastes	28.4%		
Other Film	1.4%	0.3%	2.5%	Dimension Lumber	2.4%	0.5%	4.3%
Plastic Products	1.4%	0.5%	2.3%	Other Untreated Wood	0.2%	0.0%	0.4%
Plastic/Other Materials	11.2%	1.9%	20.5%	Treated Wood	3.4%	0.0%	6.9%
Glass	1.1%			Contaminated Wood	2.3%	0.0%	4.6%
Clear Beverage	0.4%	0.0%	0.8%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.0%	0.0%	0.1%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.4%	0.0%	1.0%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	0.2%	0.0%	0.6%
Fluorescent Tubes	0.1%	0.0%	0.2%	Asphaltic Roofing	18.2%	0.0%	45.9%
Other Glass	0.3%	0.0%	0.5%	Other Construction Debris	0.3%	0.0%	0.6%
Metal	5.2%			Sand/Soil/Dirt	1.3%	0.0%	3.2%
Aluminum Cans	0.0%	0.0%	0.1%	Hazardous	1.7%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.2%	0.0%	0.4%	Hazardous Adhesives/Glues	0.4%	0.0%	0.9%
Other Nonferrous	0.2%	0.0%	0.5%	Non-Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.1%	0.0%	0.2%	Oil-based Paints/Solvents	0.0%	0.0%	0.1%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	1.8%	0.6%	3.0%	Pesticides/Herbicides	0.1%	0.0%	0.3%
Mixed Metals/Materials	2.9%	0.0%	5.8%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	9			Other NonHazardous Chemicals	1.1%	0.0%	2.1%

Table 3-12 Composition by Weight: Self-Haul Automobiles in Summer
June - August 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	9.7%			Organics	15.0%		
Newspaper	0.6%	0.0%	1.4%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	2.0%	1.1%	2.9%	Crates/Boxes	0.2%	0.0%	0.4%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	8.3%	0.9%	15.7%
Office Paper	0.2%	0.0%	0.3%	Prunings	3.3%	0.0%	7.7%
Computer Paper	0.0%	0.0%	0.0%	Food	3.2%	0.4%	6.1%
Mixed Low Grade	5.1%	1.9%	8.3%	Other Materials	11.1%		
Phone Books	0.1%	0.0%	0.3%	Textiles/Clothing	1.8%	0.7%	3.0%
Milk/Juice Polycoats	0.0%	0.0%	0.1%	Carpet/Upholstery	1.8%	0.2%	3.4%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.2%	0.0%	0.4%
Compostable/Soiled	0.3%	0.1%	0.5%	Disposable Diapers	0.1%	0.0%	0.2%
Paper/Other Materials	0.9%	0.0%	2.0%	Animal By-Products	0.3%	0.0%	0.9%
Other Paper	0.4%	0.0%	1.1%	Rubber Products	0.6%	0.0%	1.4%
Plastic	6.4%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.1%	0.0%	0.1%	Furniture	0.5%	0.0%	0.9%
HDPE Milk & Juice	0.0%	0.0%	0.1%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.1%	0.0%	0.1%	Small Appliances	1.1%	0.1%	2.2%
Other Plastic Bottles	0.0%	0.0%	0.1%	A/V Equipment	3.2%	0.0%	6.4%
Jars & Tubs	0.1%	0.0%	0.1%	Ceramics/Porcelain	1.0%	0.0%	2.0%
Expanded Polystyrene	0.6%	0.0%	1.2%	Non-distinct Fines	0.2%	0.0%	0.3%
Other Rigid Packaging	0.1%	0.0%	0.2%	Misc. Organics	0.3%	0.0%	0.7%
Grocery/Bread Bags	0.3%	0.1%	0.4%	Misc. Inorganics	0.1%	0.0%	0.2%
Garbage Bags	0.4%	0.2%	0.7%	CDL Wastes	47.2%		
Other Film	1.3%	0.0%	2.9%	Dimension Lumber	13.0%	4.1%	21.9%
Plastic Products	1.7%	0.5%	3.0%	Other Untreated Wood	3.6%	0.0%	7.6%
Plastic/Other Materials	1.6%	0.7%	2.5%	Treated Wood	8.0%	2.5%	13.6%
Glass	1.1%			Contaminated Wood	3.2%	0.3%	6.1%
Clear Beverage	0.7%	0.0%	1.5%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.1%	0.0%	0.2%	Demo Gypsum Scrap	0.6%	0.0%	1.3%
Brown Beverage	0.0%	0.0%	0.1%	Fiberglass Insulation	0.3%	0.0%	0.6%
Container Glass	0.1%	0.0%	0.1%	Rock/Concrete/Brick	6.7%	0.8%	12.6%
Fluorescent Tubes	0.1%	0.0%	0.1%	Asphaltic Roofing	4.3%	0.0%	9.7%
Other Glass	0.2%	0.0%	0.4%	Other Construction Debris	2.8%	0.0%	6.5%
Metal	5.3%			Sand/Soil/Dirt	4.7%	0.0%	11.7%
Aluminum Cans	0.0%	0.0%	0.1%	Hazardous	4.4%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.9%	0.0%	2.3%
Other Aluminum	0.1%	0.0%	0.1%	Hazardous Adhesives/Glues	0.3%	0.0%	0.6%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.3%	0.0%	0.7%
Tin Food Cans	0.1%	0.0%	0.2%	Oil-based Paints/Solvents	0.7%	0.0%	1.4%
Empty Aerosol Cans	0.0%	0.0%	0.1%	Cleaners	0.1%	0.0%	0.2%
Other Ferrous	2.6%	0.3%	4.9%	Pesticides/Herbicides	0.0%	0.0%	0.1%
Mixed Metals/Materials	2.3%	0.6%	4.1%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.8%	0.0%	2.2%
Sample Count	22			Other NonHazardous Chemicals	1.3%	0.0%	2.6%

**Table 3-13 Composition by Weight: Self-Haul Automobiles in Fall
September - November 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	7.5%			Organics	13.1%		
Newspaper	0.4%	0.1%	0.7%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	2.5%	1.3%	3.7%	Crates/Boxes	0.3%	0.0%	0.8%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	12.2%	0.0%	25.0%
Office Paper	0.8%	0.0%	1.9%	Prunings	0.2%	0.0%	0.5%
Computer Paper	0.0%	0.0%	0.0%	Food	0.4%	0.0%	0.9%
Mixed Low Grade	3.1%	1.3%	4.8%	Other Materials	29.2%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	1.1%	0.5%	1.7%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	8.8%	0.0%	18.6%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.1%	0.0%	0.1%
Compostable/Soiled	0.2%	0.0%	0.4%	Disposable Diapers	0.0%	0.0%	0.1%
Paper/Other Materials	0.2%	0.1%	0.3%	Animal By-Products	0.3%	0.0%	0.8%
Other Paper	0.3%	0.0%	0.7%	Rubber Products	0.6%	0.0%	1.2%
Plastic	4.3%			Tires	0.6%	0.0%	1.5%
PET Pop & Liquor	0.0%	0.0%	0.0%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	11.2%	3.3%	19.0%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	0.3%	0.0%	0.7%
Other HDPE Bottles	0.2%	0.0%	0.4%	Small Appliances	0.9%	0.2%	1.6%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	1.7%	0.0%	4.3%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	3.2%	0.1%	6.3%
Expanded Polystyrene	0.3%	0.1%	0.6%	Non-distinct Fines	0.1%	0.0%	0.1%
Other Rigid Packaging	0.3%	0.0%	0.6%	Misc. Organics	0.3%	0.0%	0.6%
Grocery/Bread Bags	0.1%	0.0%	0.2%	Misc. Inorganics	0.2%	0.0%	0.4%
Garbage Bags	0.2%	0.1%	0.3%	CDL Wastes	38.2%		
Other Film	0.2%	0.1%	0.4%	Dimension Lumber	10.8%	4.6%	17.0%
Plastic Products	1.8%	0.8%	2.8%	Other Untreated Wood	0.4%	0.0%	0.9%
Plastic/Other Materials	1.2%	0.1%	2.2%	Treated Wood	12.8%	5.2%	20.3%
Glass	0.9%			Contaminated Wood	1.6%	0.3%	2.9%
Clear Beverage	0.1%	0.0%	0.3%	New Gypsum Scrap	0.2%	0.0%	0.6%
Green Beverage	0.1%	0.0%	0.2%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.0%	0.0%	0.0%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	10.2%	1.5%	18.9%
Fluorescent Tubes	0.2%	0.0%	0.4%	Asphaltic Roofing	0.1%	0.0%	0.2%
Other Glass	0.5%	0.1%	1.0%	Other Construction Debris	0.4%	0.0%	1.0%
Metal	4.5%			Sand/Soil/Dirt	1.8%	0.0%	4.2%
Aluminum Cans	0.0%	0.0%	0.0%	Hazardous	2.3%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	1.1%	0.0%	2.3%
Other Aluminum	0.2%	0.0%	0.4%	Hazardous Adhesives/Glues	0.1%	0.0%	0.3%
Other Nonferrous	0.0%	0.0%	0.1%	NonHazardous Adhesives/Glues	0.2%	0.0%	0.4%
Tin Food Cans	0.0%	0.0%	0.0%	Oil-based Paints/Solvents	0.4%	0.0%	0.8%
Empty Aerosol Cans	0.2%	0.0%	0.3%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.6%	1.0%	4.2%	Pesticides/Herbicides	0.1%	0.0%	0.1%
Mixed Metals/Materials	1.5%	0.6%	2.3%	Dry-Cell Batteries	0.1%	0.0%	0.4%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.1%	0.0%	0.2%
Sample Count	21			Other NonHazardous Chemicals	0.2%	0.0%	0.6%

**Table 3-14 Composition by Weight: Self-Haul Automobiles in Winter
January, February and December 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	17.9%			Organics	10.7%		
Newspaper	2.7%	0.5%	4.8%	Pallets	1.2%	0.0%	3.2%
OCC/Kraft, unwaxed	4.5%	1.3%	7.7%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	0.6%	0.0%	1.3%
Office Paper	1.9%	0.0%	4.2%	Prunings	0.2%	0.0%	0.5%
Computer Paper	0.0%	0.0%	0.0%	Food	8.8%	0.0%	17.8%
Mixed Low Grade	7.1%	1.7%	12.4%	Other Materials	19.3%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	3.6%	0.0%	7.4%
Milk/Juice Polycoats	0.0%	0.0%	0.1%	Carpet/Upholstery	3.7%	0.0%	8.8%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.1%	0.0%	0.2%
Compostable/Soiled	0.7%	0.2%	1.2%	Disposable Diapers	0.6%	0.0%	1.3%
Paper/Other Materials	1.0%	0.2%	1.7%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.0%	0.0%	0.1%	Rubber Products	4.0%	0.0%	9.9%
Plastic	4.3%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	0.0%	0.0%	0.0%
HDPE Milk & Juice	0.0%	0.0%	0.1%	Mattresses	1.3%	0.0%	3.6%
Other HDPE Bottles	0.2%	0.0%	0.6%	Small Appliances	0.2%	0.0%	0.4%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	2.1%	0.0%	5.3%
Jars & Tubs	0.0%	0.0%	0.1%	Ceramics/Porcelain	3.5%	0.1%	6.9%
Expanded Polystyrene	0.4%	0.0%	0.7%	Non-distinct Fines	0.1%	0.0%	0.2%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	0.1%	0.0%	0.3%
Grocery/Bread Bags	0.2%	0.0%	0.3%	Misc. Inorganics	0.1%	0.0%	0.2%
Garbage Bags	0.3%	0.1%	0.6%	CDL Wastes	40.7%		
Other Film	1.0%	0.3%	1.6%	Dimension Lumber	3.8%	0.2%	7.3%
Plastic Products	1.6%	0.0%	3.3%	Other Untreated Wood	1.9%	0.0%	4.0%
Plastic/Other Materials	0.5%	0.1%	1.0%	Treated Wood	6.8%	2.2%	11.4%
Glass	1.9%			Contaminated Wood	0.1%	0.0%	0.1%
Clear Beverage	0.9%	0.0%	2.2%	New Gypsum Scrap	5.5%	0.1%	10.9%
Green Beverage	0.4%	0.0%	0.9%	Demo Gypsum Scrap	2.8%	0.0%	5.8%
Brown Beverage	0.2%	0.0%	0.4%	Fiberglass Insulation	0.4%	0.0%	0.7%
Container Glass	0.1%	0.0%	0.3%	Rock/Concrete/Brick	14.5%	1.4%	27.7%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.8%	0.0%	2.1%
Other Glass	0.2%	0.0%	0.3%	Other Construction Debris	3.4%	0.8%	6.0%
Metal	3.8%			Sand/Soil/Dirt	0.7%	0.0%	1.9%
Aluminum Cans	0.3%	0.0%	0.6%	Hazardous	1.3%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.2%	0.0%	0.4%
Other Aluminum	0.1%	0.0%	0.1%	Hazardous Adhesives/Glues	0.1%	0.0%	0.2%
Other Nonferrous	0.6%	0.0%	1.6%	NonHazardous Adhesives/Glues	0.9%	0.0%	2.3%
Tin Food Cans	0.3%	0.1%	0.5%	Oil-based Paints/Solvents	0.1%	0.0%	0.1%
Empty Aerosol Cans	0.0%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.3%	0.1%	4.4%	Pesticides/Herbicides	0.0%	0.0%	0.1%
Mixed Metals/Materials	0.3%	0.1%	0.5%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.1%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	19			Other NonHazardous Chemicals	0.0%	0.0%	0.0%

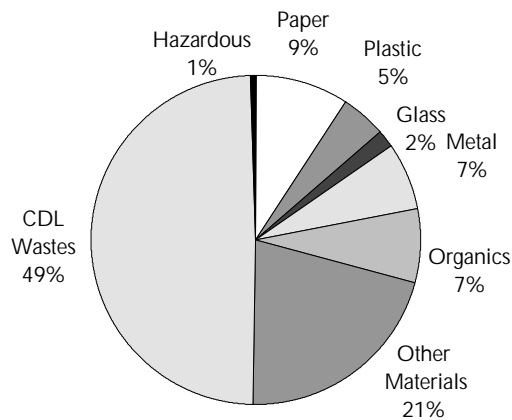
3.7 Composition of Wastes Hauled in Trucks, by Generator Type

This section provides a brief overview of the wastes self-hauled in trucks by residential and non-residential sources. For more detail regarding the residential portion of this substream, please refer to Section 3.8. For a closer examination of the non-residential wastes, please see Section 3.9.

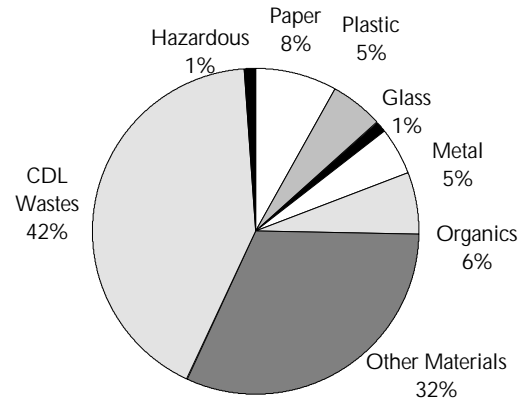
While the composition of residential and non-residential wastes hauled by franchised vehicles are often markedly different, there appears to be little difference between these sub-sections of the self-haul substream. As shown in Figure 3-5, CDL debris accounts for nearly half of the disposed waste, regardless of whether it was from residential or non-residential sources. Further, the seven other waste categories comprise similar proportions of both the residential and non-residential self-haul truck disposed tonnage.

Figure 3-5 Overview of Self-Haul Truck Composition Estimates, by Generator Type
January - December 1996

Residential Truck



Non-Residential Truck



3.8 Composition of Wastes Hauled in Trucks by Residential Generators

3.8.1 Overview

A total of 75 self-haul trucks carrying residential wastes was sampled. Composition results are shown in Table 3-15. Four materials account for 36% of this substream's disposed tonnage:

- | | | |
|---------------------|-------|-----------------------------------|
| • Treated Wood | 13.3% | Mean estimate of 1996 tons: 4,168 |
| • Dimension Lumber | 9.5% | Mean estimate of 1996 tons: 2,973 |
| • Asphaltic Roofing | 6.9% | Mean estimate of 1996 tons: 2,176 |
| • Furniture | 6.3% | Mean estimate of 1996 tons: 1,983 |

Table 3-15 Composition by Weight: Self-Haul Residential Trucks
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	2,856	9.1%			Organics	2,292	7.3%		
Newspaper	252	0.8%	0.4%	1.2%	Pallets	277	0.9%	0.0%	1.9%
OCC/Kraft, unwaxed	1,121	3.6%	2.5%	4.6%	Crates/Boxes	46	0.1%	0.0%	0.4%
OCC/Kraft, waxed	25	0.1%	0.0%	0.2%	Leaves and Grass	1,196	3.8%	2.1%	5.5%
Office Paper	40	0.1%	0.1%	0.2%	Prunings	318	1.0%	0.3%	1.7%
Computer Paper	0	0.0%	0.0%	0.0%	Food	454	1.4%	0.8%	2.1%
Mixed Low Grade	869	2.8%	1.8%	3.7%	Other Materials	6,594	21.0%		
Phone Books	61	0.2%	0.0%	0.4%	Textiles/Clothing	569	1.8%	1.0%	2.7%
Milk/Juice Polycoats	5	0.0%	0.0%	0.0%	Carpet/Upholstery	1,114	3.5%	1.8%	5.3%
Frozen Food Polycoats	2	0.0%	0.0%	0.0%	Leather	52	0.2%	0.1%	0.3%
Compostable/Soiled	132	0.4%	0.2%	0.7%	Disposable Diapers	59	0.2%	0.0%	0.4%
Paper/Other Materials	302	1.0%	0.1%	1.8%	Animal By-Products	38	0.1%	0.0%	0.3%
Other Paper	47	0.1%	0.0%	0.4%	Rubber Products	119	0.4%	0.2%	0.6%
Plastic	1,463	4.7%			Tires	52	0.2%	0.0%	0.4%
PET Pop & Liquor	7	0.0%	0.0%	0.0%	Ash	16	0.1%	0.0%	0.1%
Other PET Bottles	6	0.0%	0.0%	0.0%	Furniture	1,983	6.3%	3.9%	8.7%
HDPE Milk & Juice	10	0.0%	0.0%	0.0%	Mattresses	987	3.1%	1.5%	4.8%
Other HDPE Bottles	43	0.1%	0.1%	0.2%	Small Appliances	460	1.5%	0.7%	2.2%
Other Plastic Bottles	8	0.0%	0.0%	0.0%	A/V Equipment	494	1.6%	0.3%	2.8%
Jars & Tubs	15	0.0%	0.0%	0.1%	Ceramics/Porcelain	445	1.4%	0.0%	3.0%
Expanded Polystyrene	25	0.1%	0.0%	0.1%	Non-distinct Fines	43	0.1%	0.1%	0.2%
Other Rigid Packaging	21	0.1%	0.0%	0.1%	Misc. Organics	59	0.2%	0.0%	0.3%
Grocery/Bread Bags	38	0.1%	0.1%	0.2%	Misc. Inorganics	105	0.3%	0.0%	0.7%
Garbage Bags	38	0.1%	0.1%	0.2%	CDL Wastes	15,461	49.2%		
Other Film	55	0.2%	0.1%	0.3%	Dimension Lumber	2,973	9.5%	6.5%	12.4%
Plastic Products	713	2.3%	1.4%	3.1%	Other Untreated Wood	613	1.9%	0.2%	3.7%
Plastic/Other Materials	484	1.5%	0.9%	2.2%	Treated Wood	4,168	13.3%	8.7%	17.8%
Glass	483	1.5%			Contaminated Wood	1,422	4.5%	1.7%	7.3%
Clear Beverage	141	0.4%	0.2%	0.7%	New Gypsum Scrap	883	2.8%	0.4%	5.2%
Green Beverage	50	0.2%	0.1%	0.3%	Demo Gypsum Scrap	798	2.5%	0.9%	4.2%
Brown Beverage	57	0.2%	0.0%	0.3%	Fiberglass Insulation	58	0.2%	0.0%	0.3%
Container Glass	56	0.2%	0.0%	0.4%	Rock/Concrete/Brick	897	2.9%	0.8%	4.9%
Fluorescent Tubes	4	0.0%	0.0%	0.0%	Asphaltic Roofing	2,176	6.9%	2.4%	11.4%
Other Glass	175	0.6%	0.1%	1.0%	Other Construction Debris	791	2.5%	0.8%	4.3%
Metal	2,073	6.6%			Sand/Soil/Dirt	683	2.2%	0.0%	4.6%
Aluminum Cans	31	0.1%	0.0%	0.2%	Hazardous	212	0.7%		
Alum. Foil/Containers	3	0.0%	0.0%	0.0%	Latex Paints	62	0.2%	0.0%	0.4%
Other Aluminum	78	0.2%	0.0%	0.5%	Hazardous Adhesives/Glues	10	0.0%	0.0%	0.1%
Other Nonferrous	157	0.5%	0.1%	0.9%	NonHazardous Adhesives/Glues	10	0.0%	0.0%	0.1%
Tin Food Cans	44	0.1%	0.0%	0.2%	Oil-based Paints/Solvents	9	0.0%	0.0%	0.1%
Empty Aerosol Cans	4	0.0%	0.0%	0.0%	Cleaners	5	0.0%	0.0%	0.0%
Other Ferrous	766	2.4%	1.2%	3.7%	Pesticides/Herbicides	43	0.1%	0.0%	0.3%
Mixed Metals/Materials	990	3.2%	1.9%	4.4%	Dry-Cell Batteries	3	0.0%	0.0%	0.0%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	0	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	14	0.0%	0.0%	0.1%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	0	0.0%	0.0%	0.0%
					Other Hazardous Chemicals	15	0.0%	0.0%	0.1%
Total Tons	31,434				Other NonHazardous Chemicals	40	0.1%	0.0%	0.2%
Sample Count	75								

3.8.2 Residential Trucks, by Season

Regardless of season, CDL accounts for a substantial portion of the waste self-hauled by residential sources. Figure 3-6 provides an overview of the composition estimates, by major waste category, for self-haul residential trucks. In addition, the following sections examine each season in greater detail.

3.8.2.1 Spring

During the spring (March - May, 1996), 15 residential truck loads were sampled. As shown in Table 3-16, six materials account for a combined total of 46% of the tonnage.

- Treated Wood 10.3%
- New Gypsum Scrap 9.3%
- Dimension Lumber 7.7%
- Asphaltic Roofing 6.8%
- Furniture 6.4%
- Rock/Concrete/Brick 5.7%

3.8.2.2 Summer

During the summer (June - August, 1996), 29 residential truck loads were sampled. As shown in Table 3-17, seven materials account for a combined total of 60% of the tonnage.

- Treated Wood 16.5%
- Dimension Lumber 10.9%
- Asphaltic Roofing 10.8%
- Contaminated Wood 6.8%
- Leaves and Grass 5.2%
- Furniture 5.1%
- Carpet/Upholstery 5.0%

3.8.2.3 Fall

During the fall (September - November, 1996), 19 residential truck loads were sampled. As shown in Table 3-18, six materials account for a combined total of 49% of the tonnage.

- Treated Wood 15.7%
- Dimension Lumber 10.2%
- Leaves and Grass 6.1%
- Asphaltic Roofing 5.8%
- Sand/Soil/Dirt 5.5%
- Contaminated Wood 5.4%

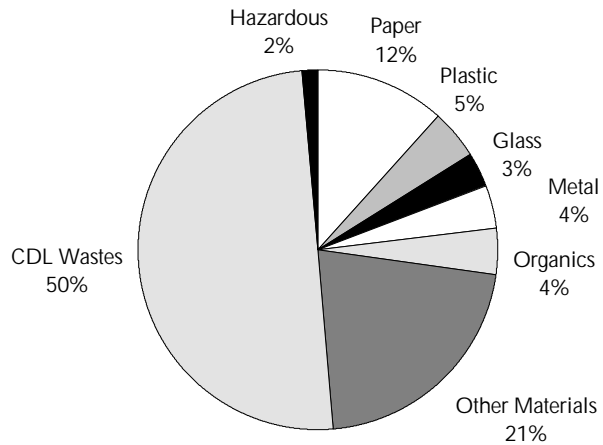
3.8.2.4 Winter

During the winter (January, February and December, 1996), 12 residential truck loads were sampled. As shown in Table 3-19, seven materials account for a combined total of 54% of the tonnage.

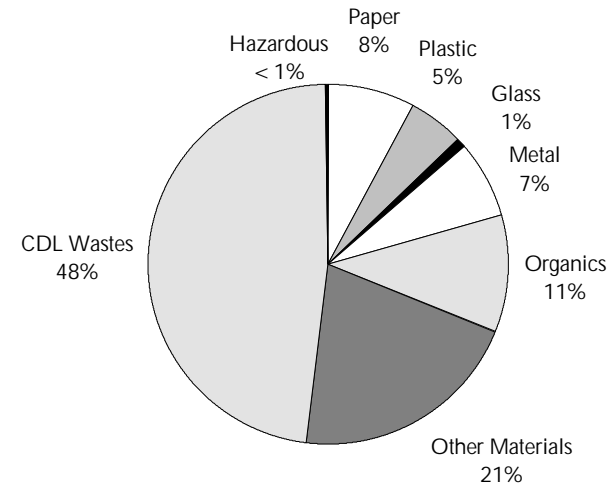
- Furniture 12.2%
- Other Untreated Wood 10.2%
- Dimension Lumber 6.8%
- Mixed Metals/Materials 6.6%
- Cardboard/Kraft, Unwaxed 6.5%
- New Gypsum Scrap 6.2%
- Food 5.2%

Figure 3-6 Overview of Self-Haul Residential Trucks Composition Estimates, by Season

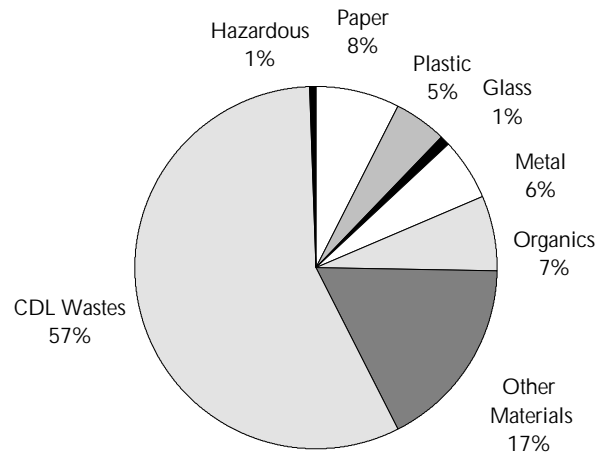
Spring



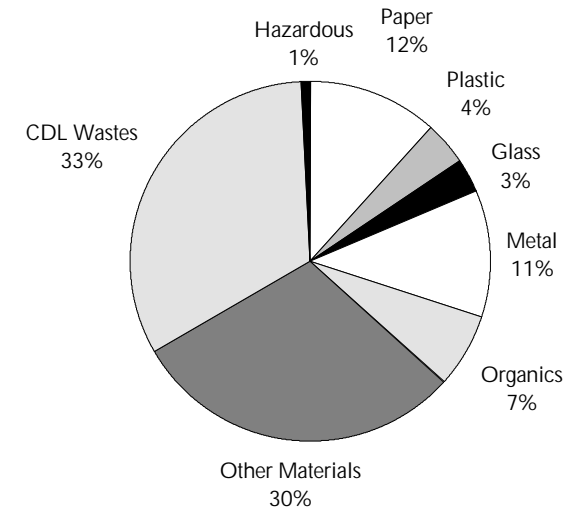
Fall



Summer



Winter



**Table 3-16 Composition, by Weight: Self-Haul Residential Trucks in Spring
March - May 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	11.7%			Organics	4.1%		
Newspaper	0.8%	0.0%	2.1%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	3.5%	1.7%	5.3%	Crates/Boxes	0.1%	0.0%	0.2%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	0.7%	0.1%	1.4%
Office Paper	0.2%	0.0%	0.5%	Prunings	1.9%	0.0%	4.8%
Computer Paper	0.0%	0.0%	0.0%	Food	1.3%	0.0%	2.9%
Mixed Low Grade	3.2%	0.7%	5.7%	Other Materials	21.3%		
Phone Books	0.4%	0.0%	1.0%	Textiles/Clothing	3.5%	0.6%	6.4%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	2.2%	0.6%	3.9%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.2%	0.0%	0.5%
Compostable/Soiled	0.1%	0.0%	0.1%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	3.5%	0.0%	8.0%	Animal By-Products	0.5%	0.0%	1.2%
Other Paper	0.0%	0.0%	0.0%	Rubber Products	0.1%	0.0%	0.3%
Plastic	4.5%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.1%	Ash	0.3%	0.0%	0.7%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	6.4%	0.9%	11.9%
HDPE Milk & Juice	0.0%	0.0%	0.1%	Mattresses	3.1%	0.0%	7.1%
Other HDPE Bottles	0.2%	0.0%	0.5%	Small Appliances	0.6%	0.1%	1.2%
Other Plastic Bottles	0.1%	0.0%	0.1%	A/V Equipment	2.4%	0.0%	5.0%
Jars & Tubs	0.0%	0.0%	0.1%	Ceramics/Porcelain	1.3%	0.0%	3.2%
Expanded Polystyrene	0.1%	0.0%	0.2%	Non-distinct Fines	0.1%	0.0%	0.3%
Other Rigid Packaging	0.0%	0.0%	0.1%	Misc. Organics	0.5%	0.0%	1.2%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	0.0%	0.0%	0.0%
Garbage Bags	0.1%	0.0%	0.2%	CDL Wastes	50.0%		
Other Film	0.1%	0.1%	0.2%	Dimension Lumber	7.7%	2.0%	13.3%
Plastic Products	2.2%	0.5%	3.8%	Other Untreated Wood	0.1%	0.0%	0.2%
Plastic/Other Materials	1.4%	0.4%	2.5%	Treated Wood	10.3%	0.5%	20.0%
Glass	3.1%			Contaminated Wood	2.3%	0.5%	4.1%
Clear Beverage	1.1%	0.1%	2.2%	New Gypsum Scrap	9.3%	0.0%	18.9%
Green Beverage	0.2%	0.0%	0.5%	Demo Gypsum Scrap	1.5%	0.0%	3.4%
Brown Beverage	0.5%	0.0%	1.1%	Fiberglass Insulation	0.0%	0.0%	0.1%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	5.7%	0.0%	15.0%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	6.8%	0.0%	18.0%
Other Glass	1.3%	0.0%	3.2%	Other Construction Debris	4.9%	1.2%	8.6%
Metal	3.9%			Sand/Soil/Dirt	1.5%	0.0%	3.3%
Aluminum Cans	0.0%	0.0%	0.0%	Hazardous	1.5%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	1.0%	0.0%	2.2%
Other Aluminum	0.2%	0.0%	0.4%	Hazardous Adhesives/Glues	0.1%	0.0%	0.3%
Other Nonferrous	1.3%	0.0%	3.4%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.0%	0.0%	0.0%	Oil-based Paints/Solvents	0.0%	0.0%	0.1%
Empty Aerosol Cans	0.0%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	0.8%	0.3%	1.3%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.6%	0.0%	3.2%	Dry-Cell Batteries	0.0%	0.0%	0.1%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.2%	0.0%	0.4%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.1%
Sample Count	15			Other NonHazardous Chemicals	0.1%	0.0%	0.3%

Table 3-17 Composition, by Weight: Self-Haul Residential Trucks in Summer
June - August 1996

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	7.5%			Organics	6.8%		
Newspaper	0.8%	0.3%	1.4%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	3.0%	0.7%	5.3%	Crates/Boxes	0.4%	0.0%	0.9%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	5.2%	1.6%	8.8%
Office Paper	0.2%	0.0%	0.3%	Prunings	0.4%	0.0%	0.8%
Computer Paper	0.0%	0.0%	0.0%	Food	0.9%	0.2%	1.5%
Mixed Low Grade	2.5%	1.2%	3.7%	Other Materials	17.0%		
Phone Books	0.1%	0.0%	0.1%	Textiles/Clothing	1.3%	0.4%	2.3%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	5.0%	1.2%	8.9%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.1%	0.0%	0.3%
Compostable/Soiled	0.7%	0.2%	1.2%	Disposable Diapers	0.2%	0.0%	0.6%
Paper/Other Materials	0.3%	0.1%	0.5%	Animal By-Products	0.1%	0.0%	0.2%
Other Paper	0.0%	0.0%	0.1%	Rubber Products	0.3%	0.0%	0.6%
Plastic	4.8%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.0%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.1%	Furniture	5.1%	0.3%	9.8%
HDPE Milk & Juice	0.0%	0.0%	0.1%	Mattresses	3.5%	0.9%	6.0%
Other HDPE Bottles	0.1%	0.0%	0.1%	Small Appliances	0.6%	0.0%	1.1%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.2%	0.0%	0.4%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	0.1%	0.0%	0.2%
Expanded Polystyrene	0.1%	0.0%	0.1%	Non-distinct Fines	0.2%	0.0%	0.3%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	0.0%	0.0%	0.1%
Grocery/Bread Bags	0.1%	0.0%	0.2%	Misc. Inorganics	0.2%	0.0%	0.5%
Garbage Bags	0.1%	0.0%	0.2%	CDL Wastes	57.1%		
Other Film	0.3%	0.1%	0.5%	Dimension Lumber	10.9%	5.3%	16.6%
Plastic Products	3.0%	1.4%	4.6%	Other Untreated Wood	0.4%	0.0%	0.9%
Plastic/Other Materials	1.0%	0.4%	1.6%	Treated Wood	16.5%	8.0%	25.1%
Glass	0.7%			Contaminated Wood	6.8%	0.4%	13.3%
Clear Beverage	0.3%	0.0%	0.5%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.1%	0.0%	0.3%	Demo Gypsum Scrap	4.5%	0.6%	8.3%
Brown Beverage	0.0%	0.0%	0.1%	Fiberglass Insulation	0.4%	0.0%	0.8%
Container Glass	0.1%	0.0%	0.1%	Rock/Concrete/Brick	2.6%	0.7%	4.5%
Fluorescent Tubes	0.0%	0.0%	0.1%	Asphaltic Roofing	10.8%	1.6%	20.0%
Other Glass	0.2%	0.0%	0.3%	Other Construction Debris	3.2%	0.0%	7.5%
Metal	5.6%			Sand/Soil/Dirt	0.9%	0.0%	2.2%
Aluminum Cans	0.1%	0.0%	0.1%	Hazardous	0.5%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.0%	0.0%	0.0%	Hazardous Adhesives/Glues	0.0%	0.0%	0.1%
Other Nonferrous	0.1%	0.0%	0.3%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.1%	0.0%	0.1%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	3.1%	0.0%	6.2%	Pesticides/Herbicides	0.3%	0.0%	0.9%
Mixed Metals/Materials	2.2%	0.1%	4.3%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	29			Other NonHazardous Chemicals	0.1%	0.0%	0.2%

**Table 3-18 Composition, by Weight: Self-Haul Residential Trucks in Fall
September - November 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	7.9%			Organics	10.5%		
Newspaper	0.8%	0.1%	1.4%	Pallets	3.1%	0.0%	6.5%
OCC/Kraft, unwaxed	2.7%	1.5%	4.0%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.2%	0.0%	0.6%	Leaves and Grass	6.1%	2.7%	9.4%
Office Paper	0.1%	0.0%	0.1%	Prunings	1.1%	0.1%	2.2%
Computer Paper	0.0%	0.0%	0.0%	Food	0.2%	0.0%	0.4%
Mixed Low Grade	2.9%	0.4%	5.3%	Other Materials	20.9%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	0.4%	0.1%	0.6%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	3.3%	0.4%	6.3%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.1%	0.0%	0.1%
Compostable/Soiled	0.1%	0.0%	0.2%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	0.6%	0.0%	1.2%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.5%	0.0%	1.2%	Rubber Products	0.7%	0.2%	1.2%
Plastic	5.1%			Tires	0.6%	0.0%	1.5%
PET Pop & Liquor	0.0%	0.0%	0.0%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	4.5%	1.4%	7.7%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	1.9%	0.0%	5.1%
Other HDPE Bottles	0.1%	0.0%	0.3%	Small Appliances	2.1%	0.2%	3.9%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	2.7%	0.0%	6.5%
Jars & Tubs	0.0%	0.0%	0.1%	Ceramics/Porcelain	3.5%	0.0%	9.1%
Expanded Polystyrene	0.0%	0.0%	0.1%	Non-distinct Fines	0.2%	0.0%	0.4%
Other Rigid Packaging	0.1%	0.0%	0.2%	Misc. Organics	0.1%	0.0%	0.3%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	0.9%	0.0%	2.2%
Garbage Bags	0.1%	0.0%	0.1%	CDL Wastes	47.7%		
Other Film	0.1%	0.0%	0.1%	Dimension Lumber	10.2%	4.7%	15.7%
Plastic Products	1.9%	0.0%	3.9%	Other Untreated Wood	0.6%	0.1%	1.0%
Plastic/Other Materials	2.6%	0.6%	4.5%	Treated Wood	15.7%	5.8%	25.6%
Glass	0.7%			Contaminated Wood	5.4%	0.3%	10.4%
Clear Beverage	0.0%	0.0%	0.0%	New Gypsum Scrap	0.2%	0.0%	0.5%
Green Beverage	0.0%	0.0%	0.1%	Demo Gypsum Scrap	2.2%	0.0%	4.3%
Brown Beverage	0.1%	0.0%	0.4%	Fiberglass Insulation	0.1%	0.0%	0.3%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	1.0%	0.0%	2.3%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	5.8%	0.0%	13.0%
Other Glass	0.5%	0.1%	1.0%	Other Construction Debris	1.1%	0.1%	2.0%
Metal	7.0%			Sand/Soil/Dirt	5.5%	0.0%	14.0%
Aluminum Cans	0.0%	0.0%	0.1%	Hazardous	0.3%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.3%	0.0%	0.8%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.7%	0.2%	1.3%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.2%	0.0%	0.5%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.2%	0.8%	3.5%	Pesticides/Herbicides	0.0%	0.0%	0.1%
Mixed Metals/Materials	3.5%	1.0%	6.1%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.1%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	19			Other NonHazardous Chemicals	0.2%	0.0%	0.6%

**Table 3-19 Composition, by Weight: Self-Haul Residential Trucks in Winter
January, February and December 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	11.7%			Organics	6.6%		
Newspaper	0.7%	0.2%	1.3%	Pallets	0.0%	0.0%	0.0%
OCC/Kraft, unwaxed	6.5%	3.9%	9.0%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.1%	0.0%	0.3%	Leaves and Grass	0.3%	0.0%	0.8%
Office Paper	0.1%	0.0%	0.2%	Prunings	1.2%	0.0%	2.8%
Computer Paper	0.0%	0.0%	0.0%	Food	5.2%	2.0%	8.3%
Mixed Low Grade	2.7%	1.3%	4.2%	Other Materials	30.1%		
Phone Books	0.6%	0.0%	1.6%	Textiles/Clothing	3.5%	0.2%	6.7%
Milk/Juice Polycoats	0.0%	0.0%	0.1%	Carpet/Upholstery	2.1%	0.0%	4.2%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.3%	0.0%	0.7%
Compostable/Soiled	0.9%	0.0%	1.7%	Disposable Diapers	0.6%	0.0%	1.5%
Paper/Other Materials	0.1%	0.0%	0.2%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.0%	0.0%	0.0%	Rubber Products	0.3%	0.0%	0.5%
Plastic	3.8%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	12.2%	6.0%	18.4%
HDPE Milk & Juice	0.1%	0.0%	0.1%	Mattresses	4.5%	0.2%	8.9%
Other HDPE Bottles	0.1%	0.1%	0.2%	Small Appliances	3.4%	0.6%	6.3%
Other Plastic Bottles	0.1%	0.0%	0.1%	A/V Equipment	1.8%	0.0%	4.8%
Jars & Tubs	0.2%	0.0%	0.4%	Ceramics/Porcelain	1.0%	0.0%	2.1%
Expanded Polystyrene	0.1%	0.0%	0.2%	Non-distinct Fines	0.0%	0.0%	0.1%
Other Rigid Packaging	0.0%	0.0%	0.0%	Misc. Organics	0.3%	0.0%	0.6%
Grocery/Bread Bags	0.3%	0.1%	0.6%	Misc. Inorganics	0.0%	0.0%	0.1%
Garbage Bags	0.2%	0.0%	0.3%	CDL Wastes	32.5%		
Other Film	0.2%	0.0%	0.3%	Dimension Lumber	6.8%	0.0%	13.9%
Plastic Products	1.4%	0.6%	2.3%	Other Untreated Wood	10.2%	0.4%	20.1%
Plastic/Other Materials	1.1%	0.4%	1.8%	Treated Wood	4.9%	2.6%	7.2%
Glass	3.1%			Contaminated Wood	0.4%	0.0%	0.8%
Clear Beverage	0.8%	0.0%	1.8%	New Gypsum Scrap	6.2%	0.0%	15.0%
Green Beverage	0.4%	0.0%	0.8%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.3%	0.0%	0.5%	Fiberglass Insulation	0.1%	0.0%	0.2%
Container Glass	1.0%	0.0%	2.5%	Rock/Concrete/Brick	3.3%	0.0%	6.6%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	0.6%	0.0%	1.4%	Other Construction Debris	0.6%	0.0%	1.1%
Metal	11.4%			Sand/Soil/Dirt	0.0%	0.0%	0.0%
Aluminum Cans	0.4%	0.0%	0.8%	Hazardous	0.7%		
Alum. Foil/Containers	0.0%	0.0%	0.1%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.8%	0.0%	1.7%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.2%	0.0%	0.5%
Tin Food Cans	0.4%	0.0%	0.7%	Oil-based Paints/Solvents	0.1%	0.0%	0.2%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.1%	0.0%	0.2%
Other Ferrous	3.4%	1.5%	5.2%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	6.6%	3.1%	10.0%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.2%	0.0%	0.6%
Sample Count	12			Other NonHazardous Chemicals	0.1%	0.0%	0.3%

3.9 Composition of Wastes Hauled in Trucks by Non-Residential Generators

3.9.1 Overview

A total of 53 self-haul trucks carrying non-residential wastes was sampled. The most prevalent materials, by weight, include:

- | | | |
|------------------------|-------|-----------------------------------|
| • Furniture | 14.2% | Mean estimate of 1996 tons: 5,462 |
| • Dimension Lumber | 12.4% | Mean estimate of 1996 tons: 4,802 |
| • Carpet/Upholstery | 7.9% | Mean estimate of 1996 tons: 3,056 |
| • Other Untreated Wood | 5.2% | Mean estimate of 1996 tons: 2,020 |

Complete composition results are shown in Table 3-20.

Table 3-20 Composition, by Weight: Self-Haul Non-Residential Trucks
January - December 1996

Calculated at 90% confidence interval

	Tons	Mean	Low	High		Tons	Mean	Low	High
Paper	3,111	8.1%			Organics	2,381	6.2%		
Newspaper	33	0.1%	0.0%	0.1%	Pallets	627	1.6%	0.3%	2.9%
OCC/Kraft, unwaxed	999	2.6%	1.8%	3.3%	Crates/Boxes	52	0.1%	0.0%	0.3%
OCC/Kraft, waxed	16	0.0%	0.0%	0.1%	Leaves and Grass	1,094	2.8%	0.5%	5.2%
Office Paper	80	0.2%	0.0%	0.4%	Prunings	300	0.8%	0.0%	2.0%
Computer Paper	2	0.0%	0.0%	0.0%	Food	308	0.8%	0.0%	1.7%
Mixed Low Grade	1,349	3.5%	1.3%	5.7%	Other Materials	12,278	31.8%		
Phone Books	43	0.1%	0.0%	0.2%	Textiles/Clothing	850	2.2%	1.0%	3.4%
Milk/Juice Polycoats	2	0.0%	0.0%	0.0%	Carpet/Upholstery	3,056	7.9%	3.8%	12.0%
Frozen Food Polycoats	0	0.0%	0.0%	0.0%	Leather	176	0.5%	0.1%	0.9%
Compostable/Soiled	63	0.2%	0.0%	0.3%	Disposable Diapers	6	0.0%	0.0%	0.0%
Paper/Other Materials	221	0.6%	0.1%	1.1%	Animal By-Products	5	0.0%	0.0%	0.0%
Other Paper	302	0.8%	0.0%	2.0%	Rubber Products	49	0.1%	0.0%	0.3%
Plastic	2,056	5.3%			Tires	2	0.0%	0.0%	0.0%
PET Pop & Liquor	13	0.0%	0.0%	0.1%	Ash	0	0.0%	0.0%	0.0%
Other PET Bottles	1	0.0%	0.0%	0.0%	Furniture	5,462	14.2%	8.1%	20.2%
HDPE Milk & Juice	0	0.0%	0.0%	0.0%	Mattresses	1,398	3.6%	1.0%	6.3%
Other HDPE Bottles	19	0.0%	0.0%	0.1%	Small Appliances	210	0.5%	0.2%	0.9%
Other Plastic Bottles	1	0.0%	0.0%	0.0%	A/V Equipment	306	0.8%	0.2%	1.4%
Jars & Tubs	4	0.0%	0.0%	0.0%	Ceramics/Porcelain	134	0.3%	0.1%	0.6%
Expanded Polystyrene	25	0.1%	0.0%	0.1%	Non-distinct Fines	114	0.3%	0.1%	0.5%
Other Rigid Packaging	17	0.0%	0.0%	0.1%	Misc. Organics	475	1.2%	0.0%	2.4%
Grocery/Bread Bags	18	0.0%	0.0%	0.1%	Misc. Inorganics	37	0.1%	0.0%	0.3%
Garbage Bags	95	0.2%	0.1%	0.4%	CDL Wastes	16,152	41.8%		
Other Film	298	0.8%	0.4%	1.1%	Dimension Lumber	4,802	12.4%	6.5%	18.4%
Plastic Products	830	2.1%	1.2%	3.1%	Other Untreated Wood	2,020	5.2%	1.4%	9.1%
Plastic/Other Materials	737	1.9%	0.6%	3.3%	Treated Wood	1,698	4.4%	1.2%	7.6%
Glass	384	1.0%			Contaminated Wood	778	2.0%	0.0%	4.2%
Clear Beverage	13	0.0%	0.0%	0.1%	New Gypsum Scrap	882	2.3%	0.0%	4.9%
Green Beverage	6	0.0%	0.0%	0.0%	Demo Gypsum Scrap	1,135	2.9%	0.6%	5.3%
Brown Beverage	7	0.0%	0.0%	0.0%	Fiberglass Insulation	120	0.3%	0.0%	0.6%
Container Glass	32	0.1%	0.0%	0.2%	Rock/Concrete/Brick	1,746	4.5%	0.9%	8.1%
Fluorescent Tubes	0	0.0%	0.0%	0.0%	Asphaltic Roofing	1,273	3.3%	0.1%	6.5%
Other Glass	326	0.8%	0.2%	1.5%	Other Construction Debris	1,698	4.4%	1.3%	7.5%
Metal	1,810	4.7%			Sand/Soil/Dirt	0	0.0%	0.0%	0.0%
Aluminum Cans	14	0.0%	0.0%	0.1%	Hazardous	424	1.1%		
Alum. Foil/Containers	1	0.0%	0.0%	0.0%	Latex Paints	0	0.0%	0.0%	0.0%
Other Aluminum	66	0.2%	0.0%	0.3%	Hazardous Adhesives/Glues	19	0.0%	0.0%	0.1%
Other Nonferrous	5	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	126	0.3%	0.0%	0.8%
Tin Food Cans	28	0.1%	0.0%	0.1%	Oil-based Paints/Solvents	31	0.1%	0.0%	0.2%
Empty Aerosol Cans	5	0.0%	0.0%	0.0%	Cleaners	2	0.0%	0.0%	0.0%
Other Ferrous	1,150	3.0%	1.6%	4.3%	Pesticides/Herbicides	5	0.0%	0.0%	0.0%
Mixed Metals/Materials	541	1.4%	0.6%	2.2%	Dry-Cell Batteries	12	0.0%	0.0%	0.1%
					Wet-Cell Batteries	0	0.0%	0.0%	0.0%
					Gasoline/Kerosene	0	0.0%	0.0%	0.0%
					Motor Oil/Diesel Oil	2	0.0%	0.0%	0.0%
					Asbestos	0	0.0%	0.0%	0.0%
					Explosives	3	0.0%	0.0%	0.0%
Total Tons	38,597				Other Hazardous Chemicals	10	0.0%	0.0%	0.0%
Sample Count	53				Other NonHazardous Chemicals	216	0.6%	0.0%	1.1%

3.9.2 Non-Residential Trucks, by Season

Across all four seasons, CDL and the miscellaneous category, "other wastes," account for the majority of debris self-hauled in trucks by non-residential sources. Figure 3-7 summarizes the sampling results while the following sections examine each season in more detail.

3.9.2.1 Spring

During the spring (March - May, 1996), 16 non-residential truck loads were sampled. As shown in Table 3-21, six materials account for a combined total of 55% of the tonnage.

- Dimension Lumber 21.7%
- Other Untreated Wood 8.2%
- Furniture 7.9%
- Asphaltic Roofing 6.5%
- Treated Wood 5.4%
- Contaminated Wood 5.4%

3.9.2.2 Summer

During the summer (June - August, 1996), eight non-residential truck loads were sampled. As shown in Table 3-22, seven materials account for a combined total of 69% of the tonnage.

- Dimension Lumber 22.8%
- Carpet/Upholstery 15.0%
- Mixed Low Grade Paper 8.4%
- Rock/Concrete/Brick 6.0%
- Leaves and Grass 5.8%
- Furniture 5.3%
- Mattresses 5.3%

3.9.2.3 Fall

In the fall (September - November, 1996), 20 non-residential truck loads were sampled. As shown in Table 3-23, four materials account for a combined total of 45% of the tonnage.

- Furniture 24.2%
- Mattresses 7.2%
- Treated Wood 6.9%
- Rock/Concrete/Brick 6.6%

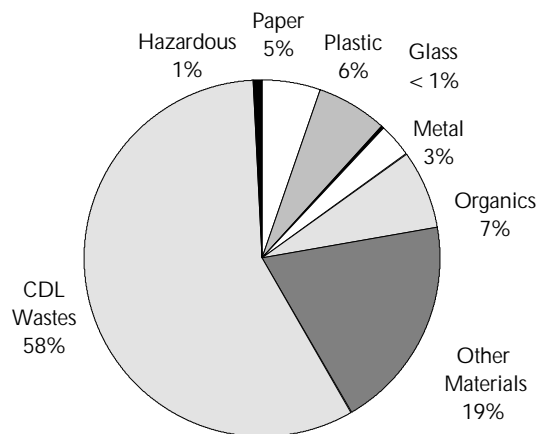
3.9.2.4 Winter

During the winter (January, February and December, 1996), nine non-residential truck loads were sampled. As shown in Table 3-24, four materials account for a combined total of 56% of the tonnage.

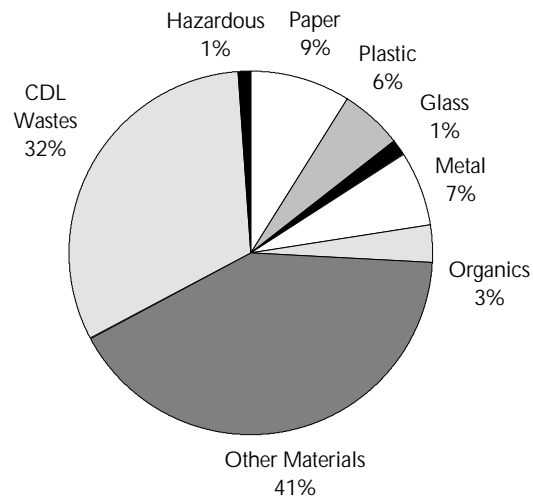
- Carpet/Upholstery 15.6%
- Other Untreated Wood 14.7%
- Furniture 14.3%
- New Gypsum Scrap 11.2%

Figure 3-7 Overview of Self-Haul Non-Residential Trucks Composition Estimates, by Season

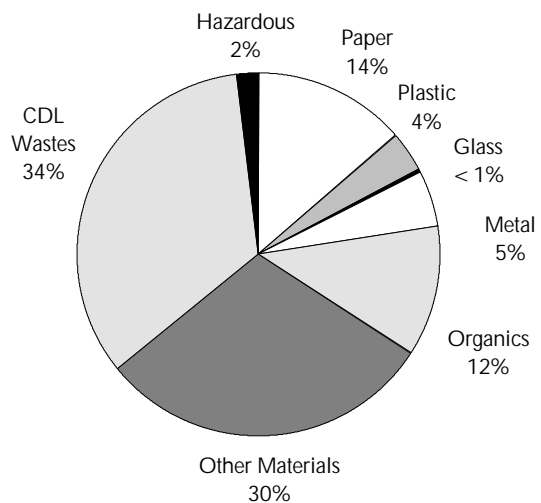
Spring



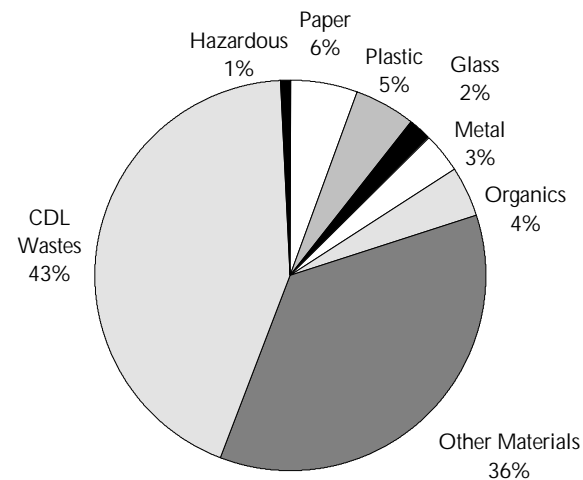
Fall



Summer



Winter



**Table 3-21 Composition, by Weight: Self-Haul Non-Residential Trucks in Spring
March - May 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	5.4%			Organics	7.2%		
Newspaper	0.1%	0.0%	0.3%	Pallets	0.3%	0.0%	0.9%
OCC/Kraft, unwaxed	2.7%	1.3%	4.2%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	4.2%	0.0%	9.1%
Office Paper	0.4%	0.0%	0.8%	Prunings	2.4%	0.0%	6.5%
Computer Paper	0.0%	0.0%	0.0%	Food	0.3%	0.0%	0.6%
Mixed Low Grade	1.3%	0.0%	2.7%	Other Materials	19.3%		
Phone Books	0.2%	0.0%	0.6%	Textiles/Clothing	2.7%	0.0%	5.4%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	4.9%	1.5%	8.2%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.6%	0.0%	1.5%
Compostable/Soiled	0.2%	0.0%	0.4%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	0.3%	0.0%	0.8%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.0%	0.0%	0.0%	Rubber Products	0.1%	0.0%	0.1%
Plastic	6.2%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.0%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	7.9%	0.8%	15.0%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	0.6%	0.0%	1.6%
Other HDPE Bottles	0.1%	0.0%	0.2%	Small Appliances	0.4%	0.0%	1.0%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	1.2%	0.0%	2.5%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	0.1%	0.0%	0.3%
Expanded Polystyrene	0.1%	0.0%	0.3%	Non-distinct Fines	0.7%	0.2%	1.2%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	0.2%	0.0%	0.4%
Grocery/Bread Bags	0.1%	0.0%	0.1%	Misc. Inorganics	0.0%	0.0%	0.0%
Garbage Bags	0.1%	0.0%	0.2%	CDL Wastes	57.6%		
Other Film	0.7%	0.3%	1.2%	Dimension Lumber	21.7%	8.6%	34.8%
Plastic Products	3.1%	0.6%	5.7%	Other Untreated Wood	8.2%	0.0%	17.5%
Plastic/Other Materials	1.8%	0.0%	3.9%	Treated Wood	5.4%	0.0%	12.8%
Glass	0.3%			Contaminated Wood	5.4%	0.0%	12.6%
Clear Beverage	0.1%	0.0%	0.1%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.0%	0.0%	0.1%	Demo Gypsum Scrap	3.9%	0.0%	10.0%
Brown Beverage	0.0%	0.0%	0.1%	Fiberglass Insulation	0.5%	0.0%	1.0%
Container Glass	0.0%	0.0%	0.0%	Rock/Concrete/Brick	1.7%	0.0%	3.4%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	6.5%	0.0%	15.3%
Other Glass	0.1%	0.0%	0.3%	Other Construction Debris	4.5%	0.0%	10.3%
Metal	3.2%			Sand/Soil/Dirt	0.0%	0.0%	0.0%
Aluminum Cans	0.0%	0.0%	0.1%	Hazardous	0.8%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.3%	0.0%	0.6%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.0%	0.0%	0.0%	Oil-based Paints/Solvents	0.3%	0.0%	0.7%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	1.4%	0.2%	2.7%	Pesticides/Herbicides	0.0%	0.0%	0.1%
Mixed Metals/Materials	1.4%	0.0%	3.1%	Dry-Cell Batteries	0.1%	0.0%	0.3%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.1%	0.0%	0.1%
Sample Count	16			Other NonHazardous Chemicals	0.3%	0.0%	0.8%

**Table 3-22 Composition, by Weight: Self-Haul Non-Residential Trucks in Summer
June - August 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	13.6%			Organics	11.6%		
Newspaper	0.1%	0.0%	0.3%	Pallets	2.6%	0.0%	6.9%
OCC/Kraft, unwaxed	2.5%	0.4%	4.6%	Crates/Boxes	0.2%	0.0%	0.5%
OCC/Kraft, waxed	0.1%	0.0%	0.2%	Leaves and Grass	5.8%	0.0%	15.4%
Office Paper	0.3%	0.0%	0.9%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.0%	0.0%	0.0%	Food	3.1%	0.0%	7.7%
Mixed Low Grade	8.4%	0.0%	18.9%	Other Materials	30.2%		
Phone Books	0.0%	0.0%	0.0%	Textiles/Clothing	1.3%	0.2%	2.4%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	15.0%	0.8%	29.3%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	1.0%	0.0%	2.6%
Compostable/Soiled	0.4%	0.0%	1.0%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	1.7%	0.0%	4.3%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.0%	0.0%	0.1%	Rubber Products	0.0%	0.0%	0.1%
Plastic	3.5%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.1%	0.0%	0.2%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	5.3%	0.0%	10.6%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	5.3%	0.0%	13.9%
Other HDPE Bottles	0.0%	0.0%	0.0%	Small Appliances	0.5%	0.0%	1.0%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.1%	0.0%	0.2%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	0.0%	0.0%	0.0%
Expanded Polystyrene	0.0%	0.0%	0.0%	Non-distinct Fines	0.2%	0.0%	0.4%
Other Rigid Packaging	0.0%	0.0%	0.0%	Misc. Organics	1.0%	0.0%	2.4%
Grocery/Bread Bags	0.1%	0.0%	0.2%	Misc. Inorganics	0.5%	0.0%	1.4%
Garbage Bags	0.7%	0.0%	1.6%	CDL Wastes	34.0%		
Other Film	0.2%	0.0%	0.3%	Dimension Lumber	22.8%	0.9%	44.7%
Plastic Products	1.9%	0.7%	3.0%	Other Untreated Wood	0.0%	0.0%	0.0%
Plastic/Other Materials	0.7%	0.1%	1.2%	Treated Wood	0.1%	0.0%	0.3%
Glass	0.3%			Contaminated Wood	1.0%	0.2%	1.9%
Clear Beverage	0.0%	0.0%	0.1%	New Gypsum Scrap	0.0%	0.0%	0.0%
Green Beverage	0.0%	0.0%	0.0%	Demo Gypsum Scrap	0.0%	0.0%	0.0%
Brown Beverage	0.0%	0.0%	0.0%	Fiberglass Insulation	0.0%	0.0%	0.0%
Container Glass	0.0%	0.0%	0.1%	Rock/Concrete/Brick	6.0%	0.0%	15.7%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.6%	0.0%	1.4%
Other Glass	0.2%	0.0%	0.6%	Other Construction Debris	3.5%	0.0%	9.2%
Metal	5.0%			Sand/Soil/Dirt	0.0%	0.0%	0.0%
Aluminum Cans	0.1%	0.0%	0.1%	Hazardous	1.8%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.1%	0.0%	0.2%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.0%	0.0%	0.0%
Tin Food Cans	0.1%	0.0%	0.2%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	3.0%	0.2%	5.8%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.7%	0.0%	4.4%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	8			Other NonHazardous Chemicals	1.8%	0.0%	4.7%

**Table 3-23 Composition, by Weight: Self-Haul Non-Residential Trucks in Fall
September - November 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	8.8%			Organics	3.3%		
Newspaper	0.0%	0.0%	0.1%	Pallets	2.5%	0.0%	5.4%
OCC/Kraft, unwaxed	3.0%	1.6%	4.3%	Crates/Boxes	0.3%	0.0%	0.7%
OCC/Kraft, waxed	0.1%	0.0%	0.2%	Leaves and Grass	0.4%	0.0%	1.0%
Office Paper	0.0%	0.0%	0.1%	Prunings	0.0%	0.0%	0.0%
Computer Paper	0.0%	0.0%	0.0%	Food	0.1%	0.0%	0.2%
Mixed Low Grade	3.2%	0.6%	5.7%	Other Materials	41.4%		
Phone Books	0.1%	0.0%	0.2%	Textiles/Clothing	2.5%	0.1%	4.9%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	2.7%	0.0%	5.4%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.3%	0.0%	0.6%
Compostable/Soiled	0.0%	0.0%	0.1%	Disposable Diapers	0.0%	0.0%	0.0%
Paper/Other Materials	0.2%	0.0%	0.4%	Animal By-Products	0.0%	0.0%	0.1%
Other Paper	2.2%	0.0%	5.6%	Rubber Products	0.3%	0.0%	0.8%
Plastic	5.7%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.0%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	24.2%	10.4%	38.0%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	7.2%	1.0%	13.5%
Other HDPE Bottles	0.0%	0.0%	0.0%	Small Appliances	0.7%	0.1%	1.4%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	1.2%	0.0%	2.7%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	0.3%	0.0%	0.6%
Expanded Polystyrene	0.0%	0.0%	0.0%	Non-distinct Fines	0.1%	0.0%	0.2%
Other Rigid Packaging	0.0%	0.0%	0.1%	Misc. Organics	1.7%	0.0%	4.5%
Grocery/Bread Bags	0.0%	0.0%	0.1%	Misc. Inorganics	0.0%	0.0%	0.0%
Garbage Bags	0.1%	0.0%	0.1%	CDL Wastes	31.6%		
Other Film	0.3%	0.1%	0.6%	Dimension Lumber	4.7%	0.4%	8.9%
Plastic Products	1.8%	0.4%	3.1%	Other Untreated Wood	0.4%	0.0%	1.0%
Plastic/Other Materials	3.4%	0.0%	6.9%	Treated Wood	6.9%	0.3%	13.6%
Glass	1.4%			Contaminated Wood	0.8%	0.0%	1.6%
Clear Beverage	0.0%	0.0%	0.1%	New Gypsum Scrap	0.7%	0.0%	1.9%
Green Beverage	0.0%	0.0%	0.0%	Demo Gypsum Scrap	2.9%	0.0%	5.9%
Brown Beverage	0.0%	0.0%	0.0%	Fiberglass Insulation	0.2%	0.0%	0.4%
Container Glass	0.0%	0.0%	0.1%	Rock/Concrete/Brick	6.6%	0.0%	15.5%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	3.7%	0.0%	9.4%
Other Glass	1.3%	0.0%	2.7%	Other Construction Debris	4.7%	0.0%	11.4%
Metal	6.6%			Sand/Soil/Dirt	0.0%	0.0%	0.0%
Aluminum Cans	0.0%	0.0%	0.0%	Hazardous	1.1%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.2%	0.0%	0.4%	Hazardous Adhesives/Glues	0.1%	0.0%	0.3%
Other Nonferrous	0.0%	0.0%	0.0%	NonHazardous Adhesives/Glues	0.9%	0.0%	2.3%
Tin Food Cans	0.1%	0.0%	0.2%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.0%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	4.8%	1.4%	8.2%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.4%	0.1%	2.8%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.1%
				Other Hazardous Chemicals	0.0%	0.0%	0.0%
Sample Count	20			Other NonHazardous Chemicals	0.1%	0.0%	0.2%

**Table 3-24 Composition, by Weight: Self-Haul Non-Residential Trucks in Winter
January, February and December 1996**

Calculated at 90% confidence interval

	Mean	Low	High		Mean	Low	High
Paper	5.5%			Organics	4.3%		
Newspaper	0.0%	0.0%	0.1%	Pallets	1.2%	0.0%	3.1%
OCC/Kraft, unwaxed	1.7%	0.8%	2.5%	Crates/Boxes	0.0%	0.0%	0.0%
OCC/Kraft, waxed	0.0%	0.0%	0.0%	Leaves and Grass	2.2%	0.0%	6.0%
Office Paper	0.1%	0.0%	0.2%	Prunings	0.4%	0.0%	1.0%
Computer Paper	0.0%	0.0%	0.0%	Food	0.5%	0.0%	1.2%
Mixed Low Grade	2.7%	0.3%	5.2%	Other Materials	35.7%		
Phone Books	0.1%	0.0%	0.3%	Textiles/Clothing	1.9%	0.0%	4.0%
Milk/Juice Polycoats	0.0%	0.0%	0.0%	Carpet/Upholstery	15.6%	0.0%	32.0%
Frozen Food Polycoats	0.0%	0.0%	0.0%	Leather	0.0%	0.0%	0.1%
Compostable/Soiled	0.2%	0.0%	0.3%	Disposable Diapers	0.1%	0.0%	0.2%
Paper/Other Materials	0.5%	0.1%	0.9%	Animal By-Products	0.0%	0.0%	0.0%
Other Paper	0.1%	0.0%	0.3%	Rubber Products	0.0%	0.0%	0.0%
Plastic	5.0%			Tires	0.0%	0.0%	0.0%
PET Pop & Liquor	0.0%	0.0%	0.1%	Ash	0.0%	0.0%	0.0%
Other PET Bottles	0.0%	0.0%	0.0%	Furniture	14.3%	1.3%	27.2%
HDPE Milk & Juice	0.0%	0.0%	0.0%	Mattresses	0.0%	0.0%	0.0%
Other HDPE Bottles	0.1%	0.0%	0.2%	Small Appliances	0.4%	0.1%	0.7%
Other Plastic Bottles	0.0%	0.0%	0.0%	A/V Equipment	0.0%	0.0%	0.0%
Jars & Tubs	0.0%	0.0%	0.0%	Ceramics/Porcelain	1.1%	0.0%	2.3%
Expanded Polystyrene	0.1%	0.0%	0.2%	Non-distinct Fines	0.1%	0.0%	0.3%
Other Rigid Packaging	0.1%	0.0%	0.1%	Misc. Organics	2.3%	0.0%	6.0%
Grocery/Bread Bags	0.0%	0.0%	0.0%	Misc. Inorganics	0.0%	0.0%	0.0%
Garbage Bags	0.4%	0.0%	0.8%	CDL Wastes	43.4%		
Other Film	2.3%	0.7%	3.8%	Dimension Lumber	1.8%	0.0%	4.3%
Plastic Products	1.5%	0.0%	3.6%	Other Untreated Wood	14.7%	1.4%	27.9%
Plastic/Other Materials	0.6%	0.0%	1.4%	Treated Wood	2.3%	0.6%	4.0%
Glass	2.1%			Contaminated Wood	0.0%	0.0%	0.0%
Clear Beverage	0.0%	0.0%	0.0%	New Gypsum Scrap	11.2%	0.0%	24.2%
Green Beverage	0.0%	0.0%	0.1%	Demo Gypsum Scrap	4.3%	0.0%	11.2%
Brown Beverage	0.0%	0.0%	0.0%	Fiberglass Insulation	0.6%	0.0%	1.6%
Container Glass	0.4%	0.0%	1.0%	Rock/Concrete/Brick	3.8%	0.0%	8.5%
Fluorescent Tubes	0.0%	0.0%	0.0%	Asphaltic Roofing	0.0%	0.0%	0.0%
Other Glass	1.7%	0.0%	3.8%	Other Construction Debris	4.7%	1.3%	8.1%
Metal	3.3%			Sand/Soil/Dirt	0.0%	0.0%	0.0%
Aluminum Cans	0.0%	0.0%	0.1%	Hazardous	0.8%		
Alum. Foil/Containers	0.0%	0.0%	0.0%	Latex Paints	0.0%	0.0%	0.0%
Other Aluminum	0.0%	0.0%	0.0%	Hazardous Adhesives/Glues	0.0%	0.0%	0.0%
Other Nonferrous	0.1%	0.0%	0.2%	NonHazardous Adhesives/Glues	0.1%	0.0%	0.3%
Tin Food Cans	0.1%	0.0%	0.2%	Oil-based Paints/Solvents	0.0%	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%	0.1%	Cleaners	0.0%	0.0%	0.0%
Other Ferrous	2.0%	0.8%	3.3%	Pesticides/Herbicides	0.0%	0.0%	0.0%
Mixed Metals/Materials	1.0%	0.0%	1.9%	Dry-Cell Batteries	0.0%	0.0%	0.0%
				Wet-Cell Batteries	0.0%	0.0%	0.0%
				Gasoline/Kerosene	0.0%	0.0%	0.0%
				Motor Oil/Diesel Oil	0.0%	0.0%	0.0%
				Asbestos	0.0%	0.0%	0.0%
				Explosives	0.0%	0.0%	0.0%
				Other Hazardous Chemicals	0.0%	0.0%	0.1%
Sample Count	9			Other NonHazardous Chemicals	0.6%	0.0%	1.6%

Appendix A

Waste Components

In the 1996 study, waste samples were sorted by hand into 85 waste component categories. Medical wastes were excluded from sorting; virtually everything else was weighed and recorded. A list of component categories and definitions follows:

Paper

NEWSPAPER: Printed newsprint. (Advertising “slicks” (glossy paper) were included in this category if found mixed with newspaper; otherwise, ad slicks are included with mixed low grade paper.)

PLAIN OCC/KRAFT PAPER: Unwaxed/uncoated old corrugated container boxes and Kraft paper, and brown paper bags.

WAXED OCC/KRAFT PAPER: Waxed/coated old corrugated container boxes and Kraft paper, and brown paper bags.

OFFICE PAPER: White or lightly colored sulfite/sulfate bond, copy papers, and envelopes.

COMPUTER PAPER: Continuous-feed sulfite/sulfate/ground wood computer printouts and forms of all types, excluding carbonless paper.

MIXED LOW GRADE: Low-grade, potentially recyclable papers, including junk mail, magazines, colored papers, bleached Kraft, boxboard, mailing tubes, and paperback books.

PHONE BOOKS: Telephone directories.

MILK/JUICE POLYCOAT: Bleached polycoated milk, ice cream, and aseptic juice containers.

FROZEN FOOD POLYCOATS: Bleached and unbleached polycoated frozen/refrigerator packaging, excluding polycoated milk/ice cream/aseptic containers.

COMPOSTABLE/SOILED PAPER: Paper towels, paper plates, waxed paper and tissues.

PAPER/OTHER MATERIALS: Predominantly paper with other materials attached, e.g., orange juice cans, spiral notebooks.

OTHER PAPERS: Carbon/carbonless copy paper, hardcover books, photographs.

Plastic

PET POP & LIQUOR: Polyethylene terephthalate translucent 2-liter and 16-ounce pop bottles, with base; PET liquor bottles, beverage bottles.

OTHER PET BOTTLES: All other PET bottles not included in above.

HDPE MILK & JUICE: High-density translucent polyethylene milk, juice, and beverage containers.

OTHER HDPE BOTTLES: All other HDPE bottles not included in above.

OTHER PLASTIC BOTTLES: Plastic bottles not otherwise classified in the defined PET or HDPE categories, includes #3-#7, unknown bottles, petroleum bottles, and other dark colored bottles.

JARS & TUBS: Wide mouth jars and tubs #1-#7 such as yogurt, cottage cheese, margarine.

EXPANDED POLYSTYRENE: Includes packaging and finished products made of expanded polystyrene.

OTHER RIGID PACKAGING: Rigid plastic packaging #1-#7 and unknown (excluding expanded polystyrene). Includes clamshells, salad trays, lids, cookie tray inserts, plastic spools, toothpaste tubes.

GROCERY/BREAD BAGS: Bread, grocery, and dry cleaner plastic film bags.

GARBAGE BAGS: Plastic garbage bags.

OTHER FILM: Includes film packaging, excluding grocery/bread and garbage bags. Also includes plastic sheeting and shower curtains

PLASTIC PRODUCTS: Finished plastic products such as toys, toothbrushes, vinyl hose and photographic negatives. Includes fiberglass resin products and materials.

PLASTIC/OTHER MATERIALS: Predominately plastic with other materials attached such as disposable razors, pens, lighters, toys, 3-ring binders.

Glass

CLEAR BEVERAGE

GREEN BEVERAGE: Includes green pop, liquor, wine, beer, lemon juice bottles.

: Includes brown pop, beer, liquor, juice, vanilla extract bottles.

CONTAINER GLASS

creamer, facial cream containers.

FLUORESCENT TUBES: Fluorescent light tubes.

: Window glass, light bulbs (except fluorescent tubes) , glassware, etc.

Metal

ALUMINUM CANS

ALUMINUM FOIL/CONTAINERS: Aluminum food containers, trays, and foil.

: Aluminum products and scrap such as window frames, cookware.

OTHER NONFERROUS

significantly contaminated with other metals or materials.

TIN FOOD CANS

EMPTY AEROSOL CANS: Empty, mixed material/metal aerosol cans. (Aerosols that still contain product are

OTHER FERROUS: Ferrous and alloyed ferrous scrap metals to which a magnet adheres and which are not

MIXED METALS/MATERIALS: Motors, insulated wire, and finished products containing a mixture of metals, or metals and other materials, whose weight is derived significantly from the metal portion of its construction. White goods are banned from Seattle's disposal. However, segments of large appliances are occasionally found; they are included in this category.

Organic

PALLETS

CRATES: Crates, and other packaging lumber/panelboard.

: Grass clippings, leaves, and weeds.

PRUNINGS

FOOD: Food wastes and scraps, including bone, rinds, etc. Excludes the weight of food containers, except when

Other Materials

TEXTILES: Fabric materials including natural and synthetic textiles such as cotton, wool, silk, woven nylon,

CARPET/UPHOLSTERY: General category of flooring applications consisting of various natural or synthetic

LEATHER: Finished products or scraps of leather.

: Disposable baby diapers and adult protective undergarments.

ANIMAL BY-PRODUCTS

RUBBER PRODUCTS: Finished products and scrap materials made of rubber, such as bath mats, inner tubes,

TIRES: Vehicle tires of all types.

: Fireplace, burn barrel, or fire pit ash.

FURNITURE

MATTRESSES: Mattresses and box springs.

: Small electric appliances such as toasters, microwave ovens, power tools, curling irons, and light fixtures.

: Televisions, stereos, radios, VCRs, etc.

CERAMICS/PORCELAIN

NONDISTINCT FINES: Nondistinct organics.

: Wax, modeling clay, bar soap, cigarette butts, etc.

MISCELLANEOUS INORGANICS

CDL Wastes

DIMENSION LUMBER:

OTHER UNTREATED WOOD: Compostable prunings or stumps 6" or greater in diameter.

: Lumber and wood products which have been painted or treated so as to render them difficult to compost.

Lumber and wood products, often with adhering concrete or other contaminants that would not compost easily.

: New gypsum wallboard scrap.

DEMO GYPSUM SCRAP

FIBERGLASS INSULATION: Fiberglass building and mechanical insulation, batt or rigid.

: Includes rock gravel larger than 2" diameter, Portland cement mixtures (set or unset), and fired-clay bricks.

: Asphalt shingles, tar paper of built-up roofing.

CONSTRUCTION DEBRIS

component categories; mixed fine building material scraps.

SAND/SOIL/DIRT

Household Hazardous

LATEX PAINTS

HAZARDOUS ADHESIVES/GLUES: Oil/resin/volatile solvent-based glues and adhesives, including epoxy,

NON-HAZARDOUS ADHESIVES/GLUES: Water-based glues, caulking compounds, grouts, and spackle.

: Solvent-based paints, varnishes, and similar products. Various solvents, including chlorinated and flammable solvents, paint strippers, solvents contaminated with other products such as methanol and isopropanol.

HAZARDOUS CLEANERS:

drains, or perform other actions.

PESTICIDES/HERBICIDES

microorganisms. Fungicides and wood preservatives, such as pentachlorophenol, are also included.

DRY-CELL BATTERIES

WET-CELL BATTERIES: Wet-cell batteries of various sizes and types, as commonly used in automobiles.

: Gasoline, diesel fuel, and fuel oils.

MOTOR OIL/DIESEL OIL

characteristics.

ASBESTOS: Asbestos and asbestos-containing wastes (if this is the primary hazard associated with these wastes).

EXPLOSIVES: Gunpowder, unspent ammunition, picric acid and other potentially explosive chemicals.

OTHER HAZARDOUS CHEMICALS: Other hazardous wastes that do not fit into the above categories, including unidentifiable materials and medical waste such as I.V. tubing and patient drapes. (Medical wastes that could be considered a bio-hazard were excluded from the sorts.)

OTHER NON-HAZARDOUS CHEMICALS: Non-hazardous soaps, cleaners, medicines, cosmetics or other household chemicals.

Changes to Waste Component Categories

The material types used to categorize Seattle's waste stream have been refined over the years. Table A-1 tracks these changes. (An "X" signifies that the component remains the same from the previous study period; an outline border reflects how components were split apart or grouped together.)

Table A-1 Changes to Waste Component Categories, 1988 to present

1988-89		1990		1992		1994		1996	
Report Name	Database Name	Report Name	Database Name	Report Name	Database Name	Report Name	Database Name	Report Name	Database Name
PAPER									
Newspaper	NEWSPAP	x	x	x	x	x	x	x	x
Corrugated Paper	CORRPAP	x	x	x	x	OCC/Kraft	x	OCC/Kraft, Unwaxed	x
Office Paper	OFFPAP	x	x	x	x	x	x	x	x
Computer Paper	COMPPAP	x	x	x	x	x	x	x	x
Mixed Scrap Paper	SCRAPAP	x	x	x	x	Mixed Low Grade	SCRAPAP	x	x
						Phone Books	PHONE	x	x
Other Paper	NRPAP	x	x	x	x	Milk/Juice Polycoats	MILKPAP	x	x
						Frozen Food Polycoats	FROZPAP	x	x
						Compostable/Soiled	SOILPAP	x	x
								OCC/Kraft, Waxed	WAXCORR
						Paper/Other Materials	PAPMAT	x	x
						Other Paper	NRPAP	x	x
PLASTIC									
PET Bottles	PETBOT	x	x	x	x	PET Pop & Liquor	PETBOT	x	x
						Other PET Bottles	OTRPET	x	x
HDPE Bottles	HDPEBOT	x	x	x	x	HDPE Milk & Juice	HDPEBOT	x	x
						Other HDPE Bottles	OTRHDEPE	x	x
Expanded Polystyrene	STYRO	x	x	x	x	x	x	x	x
Plastic Packaging	NRPLAS	x	x	x	x				
		Other Plastic Bottles	OTBOT	x	x	x	x	x	x
						Other Rigid Containers	TUBS	Jars & Tubs	TUBS
						Other Rigid Packaging	RIGPAK	x	x
						Grocery/Bread Bags	FOODBAGS	x	x
								Garbage Bags	GARBAGS
						Other Film	NRPLAS	x	x
Other Plastic Products	HARDPLAS	x	x	x	x	Plastic Products	HARDPLAS	x	x
						Plastic/Other Materials	PLASMAT	x	x
GLASS									
Nonrefillable Pop	NRPOP	x	x	x	x	Clear Beverage	CLRBEV	x	x
Refillable Pop	REPOP	x	x	x	x	Green Beverage	GRNBEV	x	x
Nonrefillable Beer	NRBEER	x	x	x	x	Brown Beverage	BRNBEV	x	x
Refillable Beer	REBEER	x	x	x	x	<i>(After 1994, characterized according to color)</i>			
Container Glass	CNTGLAS	x	x	x	x	x	x	x	x
Nonrecyclable Glass	NRGLASS	x	x	x	x	x	x	Other Glass	x
								Fluorescent Tubes	TUBES
METAL									
Aluminum Cans	ALCANS	x	x	x	x	x	x	x	x
Aluminum Foil/Containers	ALCONT	x	x	x	x	x	x	x	x
Tinned Cans	TINCAN	x	x	x	x	x	x	x	x
Bi-metal Cans	BICANS	x	x	x	x	<i>(After 1994, characterized according to predominant metal)</i>			
Ferrous	FERRMET	x	x	x	x	x	x	x	x
Nonferrous	NONFERR	x	x	x	x	x	x	Other Nonferrous	x
						Other Aluminum	OTRAL	x	x
								Empty Aerosol Cans	MTAERO
Mixed Metals/Materials	MIXMET	x	x	x	x	x	x	x	x
White Goods	WHTGDS	x	x	x	x	<i>(After 1994, banned from disposal. Parts show up in "Mixed Metals")</i>			

Table A-1, continued Changes to Waste Component Categories, 1988 to present

1988-89		1990		1992		1994		1996
Report Name	Database Name	Report Name	Database Name	Report Name	Database Name	Report Name	Database Name	Report Name
RUBBER								
Rubber Products	RUBBER	x	x	x	x	moved to "Other Materials"	x	x
Tires	TIRES	x	x	x	x	moved to "Other Materials"	x	
ORGANICS								
Wood	WOOD	x	x	Untreated Wood	UNWOOD	x	x	Dimension Lumber; <i>new category CDL Wastes</i>
				Crates/Pallets				Other Untreated Wood; <i>new category CDL Wastes</i>
								Pallets
								Crates/Boxes
				Treated Wood	TWOOD	x	x	Moved to <i>new category CDL Wastes</i>
								Contaminated Wood; <i>new category CDL Wastes</i>
Leaves and Grass	LEAVES	x	x	x	x	x	x	x
Prunings	PRUNINGS	x	x	x	x	x	x	x
Food	FOOD	x	x	x	x	x	x	x
OTHER MATERIALS								
Textiles	TEXTILES	x	x	x	x	x	x	Textiles/Clothing
						Carpet/Upholstery	CARPET	x
Leather	LEATHER	x	x	x	x	x	x	x
Disposable Diapers	DIAPERS	x	x	x	x	x	x	x
<i>(Discarded from samples prior to 1994)</i>						Animal By-Products	ANIMAL	x
Ash	ASH	x	x	x	x	x	x	x
<i>(Prior to 1994, split among various materials; Mixed Metal, Textiles, Other Plastics, etc.)</i>						Furniture	FURN	x
<i>(Prior to 1994, split among various materials; Mixed Metal, Textiles, Other Plastics, etc.)</i>						Mattresses	MATT	x
<i>(Prior to 1994, split among various materials; Mixed Metal, Textiles, Other Plastics, etc.)</i>						Small Appliances	APPLI	x
<i>(Prior to 1994, split among various materials; Mixed Metal, Textiles, Other Plastics, etc.)</i>						AV Equipment	ELECTRO	x
Ceramics, Porcelain, China	CHINA	x	x	x	x	x	x	x
Gypsum Drywall	GYPSUM	x	x	x	x	x	x	New Gypsum Scrap; <i>new category CDL Wastes</i>
								Demo Gypsum Scrap; <i>new category CDL Wastes</i>
Fiberglass Insulation	INSUL	x	x	x	x	x	x	Moved to <i>new category CDL Wastes</i>
Rock/Concrete/Brick	ROCKS	x	x	x	x	x	x	Moved to <i>new category CDL Wastes</i>
Other Construction Debris	DEBRIS	x	x	x	x	x	x	Moved to <i>new category CDL Wastes</i>
								Asphaltic Roofing; <i>new category CDL Wastes</i>
Sand, Dirt, Non-distinct Fines		x	x	x	x	Sand/Soil/Dirt	SOIL	Moved to <i>new category CDL Wastes</i>
						Non-distinct Fines	FINES	x
<i>(Prior to 1994, mostly in "Sand, Dirt, Non-distinct Fines; also in various "Mixed" categories and "Other CDL")</i>						Misc. Organics	MISORG	
<i>(Prior to 1994, mostly in "Sand, Dirt, Non-distinct Fines; also in various "Mixed" categories and "Other CDL")</i>						Misc. Inorganics	MINORG	
HOUSEHOLD HAZARDOUS								
Latex Paints	LATEX	x	x	x	x	x	x	x
Adhesives/Glues	GLUE	x	x	x	x	x	x	Hazardous Glue/Adhesives
								NonHazardous Glue/Adhesives
Oil-based Paints/Solvents	SOLVENT	x	x	x	x	x	x	x
Cleaners	CLEANER	x	x	x	x	x	x	x
Pesticides/Herbicides	PESTS	x	x	x	x	x	x	x
Batteries	BATTS	x	x	x	x	Dry-Cell Batteries	DRYBATT	x
						Wet-Cell Batteries	WETBATT	x
Gasoline/Kerosene	GAS	x	x	x	x	x	x	x
Motor Oil/Diesel Oil	OIL	x	x	x	x	x	x	x
Asbestos	ASBESTOS	x	x	x	x	x	x	x
Explosives	EXPLODE	x	x	x	x	x	x	x
Other Chemicals	CHEMICAL	x	x	x	x	x	x	Other Hazardous Chemicals
								Other NonHazardous Chemicals

Appendix B

Sampling Summary

January

Sampling began on January 8th, at the North Recycling and Disposal Station (NRDS). Thirty self-haul samples were taken that day. Commercial samples began on the 11th at the South Recycling and Disposal Station (SRDS); 15 samples were captured. On January 12th, again at the SRDS, 14 samples were captured. Three roll-offs and one of the compactors originally scheduled did not show.

February

Self-haul sampling occurred on the 2nd at the SRDS, with 16 samples captured. Four more self-haul samples were taken on February 7th, when commercial sampling took place at the SRDS. Only 13 commercial samples were captured. Four roll-offs and one compactor did not show. A second load from one of the morning's front-load routes was sampled to make up for one of the no-shows. Commercial loads were sampled again on the 8th at the SRDS. Two roll-offs and one front loader did not show.

March

Daytime commercial sampling took place on the 28th at the SRDS. Thirteen samples were captured. The problem of obtaining enough loads continued. Two drivers forgot to bring in their loads, and two roll-offs did not have garbage for scheduled loads. The first sampling of night loads occurred on the 29th. A total of 15 loads was sampled at the SRDS that evening. No self-haul sampling was scheduled in March.

April

Commercial sampling began on April 22nd at the SRDS, but was shut down after four loads due to facility overflow. The sampling was re-scheduled for the 26th, at which time another 15 samples were sorted. Night loads were sampled on the 23rd at the Rabanco site. Fifteen samples were captured. On the 29th self-haul sampling at the SRDS resulted in 20 more samples.

May

Sampling for May began with self-haul on the 22nd at the NRDS. Twenty samples were captured. Commercial sampling on the 29th at the SRDS resulted in only 11 samples. Four scheduled roll-offs had no garbage on their sample loads, one broke down, and one driver forgot. Sampling the next day, May 30th, was even more unlikely. Capacity problems at the SRDS forced a re-schedule of this day's sampling after capturing only four samples. The next available day was June 3rd.

June

Make-ups for the re-scheduled May 30th sampling occurred on June 3rd at the SRDS. Twelve loads were sampled. The first regularly scheduled June samples were taken on June 11th at the SRDS. Ten commercial loads were sampled this day. Obtaining roll-off loads with garbage and forgotten loads were again a problem. Night sampling at Eastmont took place on the 12th. Fourteen loads were sampled—every available load between 7:00pm and 5:00am. On the 26th, 20 self-haul samples were sorted at the SRDS.

July

On July 27th, 20 self-haul samples were captured at the NRDS. Fifteen daytime commercial loads were sampled on the 30th, and another 15 sampled at night on the 31st, both at the SRDS.

August

Twenty self-haul samples were taken at the SRDS on August 11. On August 14th, 15 daytime commercial loads were sampled at the SRDS. The following evening, the 15th, at the Rabanco site, another 15 commercial samples were captured.

September

On September 16th, 14 night commercial loads were sampled at Eastmont. Only 14 trucks arrived throughout this evening's sampling. A number of drivers recorded incorrect load weights; these were subsequently obtained from the hauler's records. On the 18th, 20 self-haul samples were sorted at the NRDS. Daytime commercial sampling took place at the SRDS on the 19th, 15 loads were sampled.

October

The weather on October 4th was wet and windy, possibly causing the very slow self-haul day which took place at the SRDS. Sampling intervals were cut in half, yet nine hours went by before all 20 samples had been completed. Both commercial samplings this month were daytime shifts at the SRDS. Fifteen loads each day were taken on the 11th and 17th.

November

On the night of November 12th, 15 samples were captured at the SRDS. A schedule conflict caused the day sampling, originally on the 11th, to be moved to the 25th. On that day, 15 more samples were taken at the SRDS. On the 14th, at the NRDS, the final 20 self-haul samples occurred.

December

The final two commercial samplings occurred on the 16th, at the SRDS during the day, and on the 17th at the Rabanco site during the night. Only 13 samples showed on the 16th. Fifteen samples were taken on the next night, the 17th.

Appendix C

Sampling Methodology

Overview

The objective of this task was to provide statistically significant data on the composition of Seattle's commercial and self-haul waste streams.

The 1996 sorting methodology is different from the 1992 phase (the last time the commercial and self-haul substreams were sampled) in two respects:

- The component categories were revised to provide more detail about specific materials in the waste stream. These category changes are tracked in Appendix A.
- Revisions to the component categories significantly decreased the amount and incidence of “supermix” (a residue composed of mixed material, each piece smaller than one half inch). In the rare cases when supermix did remain after sorting the major categories (never more than 10 pounds), the composition was visually estimated. In 1992, a sub-sample of the supermix was sorted.

Substream Definition

For any specific geographic area, the total waste stream is composed of various substreams. A “substream” is determined by the particular generation, collection, or composition characteristics which make it a unique portion of the total waste stream. This study targets two main substreams:¹

- The **commercial** substream is comprised of wastes a) generated at businesses and institutions, and b) collected by contracted hauling companies.
- The **self-haul** substream is comprised of wastes a) generated at residences as well as businesses and institutions, and b) hauled by the household or business that generated the waste.

The City owns two transfer stations (North and South Recycling and Disposal Stations—NRDS and SRDS). All self-haul wastes included in this study were disposed at either the NRDS or SRDS. Wastes generated within Seattle may also be hauled to three private facilities, one of which is a dedicated construction, demolition and landclearing waste (CDL) site.

Most CDL waste generated in Seattle is disposed separately from the municipal solid waste (MSW). Since this study measures the composition of MSW only, pure CDL loads were excluded. Therefore, no samples were taken from Black River (a dedicated CDL site) and none of the CDL-only loads delivered to the Rabanco transfer facility were included. Occasionally, however, CDL-only loads are disposed in the MSW stream. Using the pre-established sampling schedule, five of the selected commercial vehicles and 27 of the self-haul vehicles were actually carrying pure CDL wastes.²

¹ The residential substream was not included in this study. For the most recent analysis of Seattle's residential waste stream, please see the *1994/95 Residential Waste Composition Study Final Report* prepared for the Seattle Solid Waste Utility by the Cascadia Consulting Group.

² Three commercial samples from 3/29/96 (night shift), one from 4/26/96 (day shift) and one from 12/16/96 (day shift). Thirteen of the self-haul CDL loads were sampled at NRDS and the remaining 14 were sorted at SRDS. For more detail regarding Seattle's CDL waste stream, please see the *Construction, Demolition and Landclearing Debris Study Final Report* prepared for Seattle Public Utilities by Cunningham Environmental Consulting and Cascadia Consulting Group (1997).

Hauler and Transfer Station Participation

The first step in selecting sample loads required collecting detailed data from the City of Seattle Solid Waste Utility and the two franchised haulers regarding total tonnage, the split between franchised and self-hauled waste, average load weights for each vehicle type, and the number of loads hauled during the day and night shifts.

For the day shift sorting, the franchised haulers agreed to divert trucks to the City's SRDS so that wastes from both haulers could be sampled on the same day. (The two companies generally haul waste to their own, privately operated facilities.) The burden of hosting the night shift sampling was shared among the SRDS, Eastmont and Rabanco sites.

After the commercial sampling schedule was determined, copies were given to each franchised hauler, who was requested to provide the following data:

- the geographic area the route covered on the sorting day, and
- the number of accounts included in the run on that day.

As the commercial substream sampling days approached, the companies were requested to inform the affected drivers. Each involved driver was then made aware of the process to be followed upon the completion of his run.

Transfer station managers were also given the sampling schedule and other pertinent information. The field manager worked out the details of truck diversion, sample extraction, sorting, and disposal of sorted waste with each transfer station manager.

Sampling Calendar

At least 360 commercial and 200 self-haul samples were to be selected. Since the field crew can sort approximately 15 commercial loads and 20 self-haul loads per day, 24 days of commercial and 10 days of self-haul sampling were required. The commercial sampling events were evenly distributed over 12 months (two consecutive days per month). By sampling self-haul loads at a rate of one day per month, 10 months were required. No self-haul samples were scheduled for March or December (these months were selected by a random number generator).

Commercial trucks may arrive during either the day or night shifts. About 67% of Seattle's commercial waste is hauled during the day, so 67% of the sampling events (16 of 24) were scheduled during the day. The remaining commercial sampling events (8 of 24) were scheduled at night. Self-haul loads arrive during the day shift only.

Sampling dates within each month were chosen using a random number generator. (Since commercial vehicles do not operate on Sunday, these days were eliminated for the commercial substream.)

Due to the expense of moving the sampling crew from site to site, sampling occurred at only one facility per sampling day. As described above, all day shift commercial sampling took place at the SRDS, with the franchised haulers diverting trucks to this location. The night shift sampling events were spread nearly evenly among the SRDS, Eastmont and Rabanco sites. Since the proportion of self-haul tonnage transported to the NRDS and SRDS is nearly equal (55% and 45%, respectively), half the self-haul sampling days were scheduled at the NRDS and half at the SRDS.

The resulting sampling calendar is shown in Figure C-1.

Figure C-1 Sampling Calendar

January				February				March				April			
Date	Substream	Time	Location	Date	Substream	Time	Location	Date	Substream	Time	Location	Date	Substream	Time	Location
8	Self-Haul	Day	NRDS	2	Self-Haul	Day	SRDS	28	Comm	Day	SRDS	23	Comm	Night	3rd & L
11	Comm	Day	SRDS	7	Comm	Day	SRDS	29	Comm	Night	SRDS	26	Comm	Day	SRDS
12	Comm	Day	SRDS	8	Comm	Day	SRDS					29	Self-Haul	Day	SRDS
May				June				July				August			
Date	Substream	Time	Location	Date	Substream	Time	Location	Date	Substream	Time	Location	Date	Substream	Time	Location
22	Self-Haul	Day	NRDS	3	Comm	Day	SRDS	27	Self-Haul	Day	NRDS	11	Self-Haul	Day	SRDS
29	Comm	Day	SRDS	11	Comm	Day	SRDS	30	Comm	Day	SRDS	14	Comm	Day	SRDS
				12	Comm	Night	Eastmont	31	Comm	Night	SRDS	15	Comm	Night	3rd & L
				26	Self-Haul	Day	SRDS								
September				October				November				December			
Date	Substream	Time	Location	Date	Substream	Time	Location	Date	Substream	Time	Location	Date	Substream	Time	Location
16	Comm	Night	Eastmont	4	Self-Haul	Day	SRDS	12	Comm	Day	NRDS	16	Comm	Day	SRDS
18	Self-Haul	Day	NRDS	11	Comm	Day	SRDS	14	Self-Haul	Day	SRDS	17	Comm	Night	3rd & L
19	Comm	Day	SRDS	17	Comm	Day	SRDS	25	Comm	Night	SRDS				

Sample Selection

Commercial loads were selected using the following procedure:

1. Samples were allocated to each of the two haulers, for both the day and night shifts, based on the proportion of tonnage collected. For example, one of the companies hauls 37% of Seattle's daytime commercial tonnage, so 37% of the day shift samples are assigned to that hauler.
2. Next, samples were allocated to specific vehicle types based on each hauler's average tons per vehicle type per shift.
3. Since many of the vehicles transport more than one load per shift, and since there are more vehicles per shift than the quota to be sampled, it was necessary to designate which specific loads were to be sampled. An identifier was assigned to every expected load for each vehicle type, hauler, shift and sampling day. A random number generator sorted the identifiers; loads were selected in that sequence until the quota for that vehicle type, hauler, shift and sampling day was filled.

Self-haul loads were selected as described below:

1. The City pre-determined that one-third of the self-haul samples would be taken from automobiles and the remaining two-thirds from trucks (includes both pick-ups and larger collection trucks).
2. Sampling intervals for each vehicle type (e.g., every "nth" car) were determined by dividing the day's expected number of arriving vehicles by the number of samples needed on that day. The expected traffic is based on vehicle count data from the same day of the same week in 1994.

As the study progresses, key planning assumptions were monitored. When necessary, the sampling plan was modified to meet the objectives of the study design.

Field Sampling Procedures

Pre-established sampling intervals were used for the field operations. Truck identification numbers, obtained from the haulers just prior to sampling, were recorded before each commercial substream sort. As each sample load arrived, the field supervisor noted the total load weight and approximate arrival time.

The entire truckload of waste was dumped into the pit. Wherever possible, an imaginary 8-section, 2-layer grid (16 cells total) was superimposed on the load, and a randomly selected cell was identified for sampling. Frequently, to prevent the commingling of garbage to be sampled with that in the pit, the loader would nose in the stream of material falling from the truck, capturing a 5-cubic yard slice of garbage. Approximately 250 pounds of waste were dumped from the loader onto a tarp for sorting.

Each sample was sorted by hand into the defined component groups. Food containers were separated from the food and classified according to the containers' material. Each sample was sorted to the greatest reasonable detail. Rarely, a "supermix" of material (a residue composed of mixed material, each piece smaller than one half

inch) remained after sorting a sample. In these cases, the field supervisor weighed the combined supermix (never totaling more than 10 pounds) and visually estimated the percentage of each component material in the supermix. The weights of all materials were recorded on tally sheets, shown in Appendix E.

Appendix D

Calculations

Composition Calculations

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

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

where:

c = weight of particular component

w = sum of all component weights

for i = 1 to n

where n = number of selected samples

for j = 1 to m

where m = number of components

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

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

where:

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

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

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

where:

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

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

Weighted Averages

The overall commercial and overall self-haul waste composition estimates were calculated by performing a weighted average across the relevant substreams. For the commercial substream, the overall estimate was calculated by performing a weighted average based on the tonnage carried by each hauler, vehicle type and shift. For the self-haul substream, the overall estimate was calculated by performing a weighted average based on the tonnage hauled to each site by vehicle type.

First, Seattle provided the estimate of tonnage disposed by each substream. Next, these proportions were applied to the relevant substream's waste composition estimates.

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

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

where:

p = the proportion of tonnage contributed by the noted substream

r = ratio of component weight to total waste weight in the noted substream

for j = 1 to m

where m = number of components

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

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

In this report, the waste composition results are sometimes calculated without using a weighted average, or they may be calculated with one or two levels of weighting. When this occurs, the total composition of the various sub-sections of a waste stream may not precisely equal the overall composition. For example, the sum of self-hauled newspaper at the NRDS and SRDS does not exactly equal the amount of newspaper in the overall self-haul composition (Tables 4-3, 4-4 and 4-2, respectively). The NRDS and SRDS results are unweighted, while the overall self-haul results are weighted both by site and by vehicle type. The NRDS and SRDS compositions are not weighted by vehicle type because that would blur the distinction under analysis (e.g., North versus South).

Comparison Calculations

Identifying statistically significant differences requires a two-step calculation. First, assuming that the two groups to be compared have the same variance, a **pooled sample variance** is calculated:

$$S_{pool}^2 = \frac{[(n1 - 1) \cdot (n1 \cdot \hat{V}_{r_{j1}})] + [(n2 - 1) \cdot (n2 \cdot \hat{V}_{r_{j2}})]}{n1 + n2 - 2}$$

Next, the **t-statistic** is constructed:

$$t = \frac{(r1 - r2)}{\sqrt{\frac{S_{pool}^2}{n1} + \frac{S_{pool}^2}{n2}}}$$

The **p-value** of the t-statistic is calculated based on (n1+n2 -2) degrees of freedom.

Appendix E

Field Forms

PAPER

Newspaper				
Plain OCC/Kraft				
Waxed OCC/Kraft				
Mixed Low Grade				
Phone Books				
Office Paper				
Computer Paper				
Milk/Ice Cream/Juice				
Frozen Food Polycoats				
Compostable Soiled				
Paper/Other Materials				
Other Paper				

GLASS

Clear Beverage/Liquid				
Green Beverage/Liquid				
Brown Beverage/Liquid				
Container Glass				
Other Glass				
Fluorescent Tubes				

PLASTICS

#1 Pop & Liquor				
#1 Other Bottles				
#2 Milk & Juice				
#2 Other				
Other Bottles				
Jars & Tubs				
Expanded Polystyrene				
Other Rigid Packaging				
Grocery/Store/Bread Bags				
Garbage Bags				
Other Plastic Film				
Plastic Products				
Plastic/Other Materials				

WOOD & YARD WASTES

Dimension Lumber				
Other Untreated Wood				
Pallets				
Crates/Boxes				
Treated Wood				
Contaminated Wood				
Leaves & Grass				
Prunings				

METALS

Alum. Beverage Cans				
Alum. Foil/Containers				
Other Aluminum				
Tinned Food Cans				
Other Ferrous				
Other Nonferrous				
Mixed Metals/Material			Oil Filters (count):	
Empty Aerosol Cans				

ORGANICS

Food Wastes				
Textiles/Clothing				
Carpet/Upholstery				
Leather				
Disposable Diapers				
Animal By-products				
Rubber Products				
Tires				
Ash				
Misc. Organics				

Sample Number:

Date:

Location:

Furniture		
Mattresses		
Small Appliances		
Audio/Visual Equipment		
Ceramics/China		
New Gypsum Scrap		
Rock/Concrete/Bricks		
Sand/Soil/Dirt		
Misc. Inorganics		

HAZARDOUS WASTES

Non-hazardous Glues		
Oil-based Paint/Thinners		
Hazardous Cleaners		
Dry-cell Batteries		
Wet-cell Batteries		
Gasoline/Kerosene		
Motor Oil/Diesel Oil		
Explosives		
Other Non-hazardous		

LOAD TYPE: <div style="text-align: center;">1 2</div>	VEHICLE TYPE: P - Pickup Trucks RL - Rear Loader SL - Side Loader ROD - Loose Roll-Off ROC - Compactor Roll-Off	
B - Bayside (WMI) S - SD/Emerald City		INCOME 2: SIZE 2:
DEST.: S -SRDS B - Eastmont (WMI) L - 3rd & Lander (SD)	D - Restaurant E - Hotel/Motel H - Education I - Transportation J - Other Services K - Mixed Gen Types L - CDL	COMMENTS:

REDUCTION INDICATORS

	Pounds	
Cup-'O-Soups		Pesticide Containers
Yogurt Cups		Small Appliances
		A/V Equipment
Toys		

Appendix F

Year-to-Year Comparison Calculations

The comparison methodology is outlined in the first section of this appendix. For more detail, the remaining sections describe technical issues regarding the statistics and present the full calculation results.

Background

In an ongoing effort to monitor the types and amounts of materials disposed locally, Seattle has performed several waste characterization studies. Differences are often apparent between project years. In this appendix, selected results from the 1996 study are compared to 1992 findings.¹ The purpose of this comparison is simply to determine whether the changes are statistically significant. The reasons *why* or *how* these changes occurred were not investigated.

Table F-1 lists the waste categories chosen for analysis. Composition variations were measured within the following substreams:

- overall commercial
- self-haul trucks
- self-haul automobile

In order to control for population changes and other factors that may influence the total amount of waste disposed from year to year, the tests described in this appendix measure waste proportions, not actual tonnage. For example, say that newspaper accounts for 5% of a particular substream's disposed waste each year, and that the substream disposed a total of 1,000 tons of waste in one year and 2,000 tons of waste in the next. While the amount of newspaper increased from 50 to 100 tons, the percentage remained the same. Therefore, the tests would indicate that there had been no change.

The purpose of conducting these comparisons is to identify statistically significant changes, within each substream, in the percentage of selected types of waste disposed over time. One specific example is stated as follows:

Hypothesis: "There is no statistically significant difference, between the 1992 and 1996 study periods, in the percentage of cardboard disposed in the commercial substream."

¹ The 1992 study was also conducted by Cascadia Consulting Group, following the same basic methodology as the 1996 project. Only one difference in field methods would affect the year-to-year comparisons. In 1992, animal wastes were discarded from samples. In 1996, these wastes were sorted and weighed. For the purpose of the comparison, animal wastes were excluded from the 1996 sampling data before the statistical calculations were performed.

Table F-1 Material Groupings Used for Comparisons

Comparison Label	Sampling Components		Substream Analyzed
	1992	1996	
Unwaxed OCC/Kraft	Corrugated Paper	OCC/Kraft, unwaxed	Both
Office and Computer Paper	Office Paper	Office Paper	Commercial Only
	Computer Paper	Computer Paper	
Low Grade Paper	Scrap Paper	Mixed Low Grade Phone Books	Commercial Only
Plastic	PET Bottles HDPE Bottles Other Plastic Bottles Expanded Polystyrene Plastic Packaging Other Plastic Products	PET Pop & Liquor Other PET Bottles HDPE Milk & Juice Other HDPE Bottles Other Plastic Bottles Jars & Tubs Expanded Polystyrene Other Rigid Packaging Grocery/Bread Bags Garbage Bags Other Film Plastic Products Plastic/Other Materials	Commercial Only
Recyclable Metal	Aluminum Cans Aluminum Containers Nonferrous Tin Cans Bi-Metal Cans Ferrous Metals	Aluminum Cans Alum. Foil/Containers Other Aluminum Other Nonferrous Tin Food Cans Empty Aerosol Cans Other Ferrous	Self-Haul Only
Food	Food	Food	Commercial Only
Leaves, Grass and Prunings	Leaves and Grass	Leaves and Grass	Self-Haul Only
	Prunings	Prunings	
Carpet and Textiles	Carpet and Textiles	Textiles/Clothing Carpet/Upolstery	Self-Haul Only
Untreated Wood	Untreated Wood	Dimension Lumber Pallets Crates/Boxes Other Untreated Wood	Both
Treated and Contaminated Wood	Treated Wood	Treated Wood Contaminated Wood	Both
Construction and Demolition	Rocks, Concrete, Bricks Gypsum Wallboard Fiberglass Insulation Other Construction Debris	New Gypsum Scrap Demo Gypsum Scrap Fiberglass Insulation Rock/Concrete/Brick Asphaltic Roofing Other Construction Debris	Both
Hazardous	Latex Paints Adhesives, Glues Oil-Based Paints, Solvents Caustic Cleaners Pesticides, Herbicides Batteries Gas, Kerosene Motor Oil, Diesel Oil Asbestos Explosives Other Chemicals	Latex Paints Hazardous Adhesives/Glues NonHazardous Adhesives/Glues Oil-based Paints/Solvents Cleaners Pesticides/Herbicides Dry-Cell Batteries Wet-Cell Batteries Gasoline/Kerosene Motor Oil/Diesel Oil Asbestos Explosives Other Hazardous Chemicals Other NonHazardous Chemicals	Both

Statistics are then employed to look for evidence disproving the hypothesis. A “significant” result means that there is enough evidence to disprove the hypothesis and it can be concluded that there is a true difference across years. “Insignificant” results indicate that either a) there is no true difference, or b) even though there may be a difference, there is not enough evidence to prove it.¹

The purpose of these tests is to identify changes across years. However, the study did not attempt to investigate *why* or *how* these changes occurred. The changes may be due to a variety of factors. For example, the decrease in cardboard in the commercial substream could be due to any combination of the following:

- Consumer Preferences—plastic containers might have captured some of the market previously held by corrugated containers.
- Technology—manufacturers might use thinner paperboard than in the past, which would decrease the weight of cardboard, even if the same number of boxes were disposed.
- Recycling—more businesses may participate in cardboard recycling programs.

Future studies could be designed to test the influence of various potential sources of the increase/decrease of specific materials in the disposed waste stream.

Statistical Considerations

The analyses are based on the component percentages, by weight, for each selected substream. As described in Appendix D, these percentages are calculated by dividing the sum of the selected component weights by the sum of the corresponding sample weights. T-tests (modified for ratio estimation) were used to examine the year-to-year variation.

Normality

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

Dependence

There may be dependence between waste types (if a person disposes of material A, they always dispose of material B at the same time).

There is certainly a degree of dependence between the calculated percentages. (Since the percentages sum to 100, if the percentage of material A increases, the percentage of some other material must decrease). This type of dependence is somewhat controlled by choosing only a portion of the waste categories for the analyses.

Future studies might be merited to examine these two types of dependence explicitly.

¹ Please see the “Power Analysis” discussion on page F-4.

Multiple T-Tests

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

The adjustment can be explained as follows:

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

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

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

The chance of a “false positive” for this study is restricted to 10% overall, or 1.11% for each test (10% divided by the nine tests within each substream equals 1.11%).

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

Power Analysis

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

Interpreting the Calculation Results

The following tables include detailed calculation results. An asterisk notes the statistically significant differences.

For the purposes of this study, only those calculation results with a p-value of less than 1.11% for the commercial substream and less than 1.25% for the self-haul substream are considered to be statistically significant. As described above, the threshold for determining statistically significant results (the “alpha-level”) is conservative, accounting for the fact that so many individual tests were calculated.

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

For example, in Table F-2 the proportion of office and computer paper in the disposed commercial substream dropped from 4.08% to 2.10% across the study periods. The t-statistic is relatively large (4.0707) and the probability (p-value) of observing that t-statistic if there had been no true difference between years is just 0.01%. This value is less than the study’s pre-determined threshold for statistically significant results (alpha-level of 1.11%); thus the decrease in office and computer paper is considered to be a true difference. On the other hand, the p-value corresponding to the increase in treated and contaminated wood is very large. The chance of observing the 2.67% to 3.47% increase when the actual proportion had not changed is 77.17%—much too high to be considered a true difference.

**Table F-2 Comparison of Commercial Composition Results
(Includes all 9 comparison groups)**

	Mean Ratio		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0111)
	(Material Wt/Total Wt)			
	1992	1996		
Unwaxed Cardboard & Kraft	0.1034	0.0681	5.3476	0.0000 *
Office and Computer Paper	0.0408	0.0210	4.0707	0.0001 *
Low Grade Paper	0.0615	0.1046	3.9424	0.0001 *
Plastic	0.1138	0.1184	0.1896	0.8497
Food Waste	0.1346	0.2100	4.2964	0.0000 *
Untreated Wood	0.1019	0.0557	3.9270	0.0001 *
Treated and Contaminated Wood	0.0234	0.0251	0.2907	0.7714
Construction and Demolition	0.0267	0.0347	1.0474	0.2954
Hazardous	0.0028	0.0051	1.2152	0.2248
<i>Number of Samples</i>	251	348		

As discussed in the “Dependence” section, above, there is a chance that a decrease in the percentage of one material may force the percentage of another material to rise, even though there had been no real increase. The proportions of unwaxed cardboard, office & computer paper and untreated wood decreased from 1992 to 1994. A second test, which ignored these three components, was performed to verify the significance of the other changes. As shown in Table F-3, results of the second test confirmed that the increases in low grade paper and food waste were statistically significant.

**Table F-3 Comparison of Selected Commercial Composition Results
(disregards the decreases identified in Table F-2)**

	Mean Ratio		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0167)
	(Material Wt/Total Wt)			
	1992	1996		
Low Grade Paper	0.0816	0.1223	3.1225	0.0019 *
Plastic	0.1510	0.1385	0.4187	0.6756
Food Waste	0.1785	0.2455	3.2198	0.0014 *
Treated and Contaminated Wood	0.0310	0.0294	0.2190	0.8267
Untreated Wood	0.0354	0.0405	0.5616	0.5746
Hazardous	0.0038	0.0059	0.9853	0.3249
<i>Number of Samples</i>	251	348		

As shown in Table F-4 and F-5, no significant differences across years were found in either the self-haul truck or self-haul automobile waste composition. It should be noted that self-haul wastes are markedly more variable than either the commercial or residential substream. Therefore, differences would have to be extreme, or the sample sizes particularly large, to identify statistically significant changes.

Table F-4 Comparison of Self-Haul Trucks Composition Results

	Mean Ratio		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0125)
	(Material Wt/Total Wt)			
	1992	1996		
Unwaxed Cardboard & Kraft	0.0426	0.0314	1.5762	0.1176
Recyclable Metal	0.0593	0.0338	2.0069	0.0470
Leaves, Grass and Prunings	0.0431	0.0429	0.0136	0.9892
Carpet and Textiles	0.1096	0.0744	1.7176	0.0885
Untreated Wood	0.1607	0.1550	0.1940	0.8465
Treated and Contaminated Wood	0.1373	0.1283	0.2962	0.7676
Construction and Demolition	0.1558	0.1781	0.6047	0.5466
Hazardous	0.0094	0.0086	0.2532	0.8005
<i>Number of Samples</i>	50	71		

Table F-5 Comparison of Self-Haul Automobiles Composition Results

	Mean Ratio		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0125)
	(Material Wt/Total Wt)			
	With	1996		
Unwaxed Cardboard & Kraft	0.0318	0.0301	0.1736	0.8623
Recyclable Metal	0.0385	0.0304	0.5101	0.6104
Leaves, Grass and Prunings	0.0253	0.0703	1.3255	0.1861
Carpet and Textiles	0.0827	0.0828	0.0034	0.9973
Untreated Wood	0.2062	0.1039	2.1717	0.0307
Treated and Contaminated Wood	0.1440	0.1005	1.0620	0.2892
Construction and Demolition	0.1986	0.1792	0.2710	
Hazardous	0.0066	0.0249	2.4902	
<i>Number of Samples</i>	147	128		

Appendix G

Database Description

Data was double-entered into a Clipper database application specifically constructed for this project. In addition to the actual waste results, each record includes route, demographic and delivery characteristics of the sample. A description of the data fields and structure of each record follows.

Database Structure

Each record consists of 104 fields of fixed size and type (85 of these fields are the components and waste reduction indicators). Please refer to Appendix A for a complete listing of the field names of each waste components. The database file is compatible with the dBase III Plus file construct. A complete description of all fields is given below.

The field types used include Character, Date, Numeric, and Memo. The Character and Date field widths represent the total formatted width of the field. Dates are carried as "mm/dd/yy." Numeric field widths represent the total number of digits contained, including the decimal point, if applicable. Each record can have an associated Memo of up to 64K characters in length.

Field #	Field Name	Type	Width	Dec.	Description
1	LOADTYPE	C	1		Type of Load
2	RD1	C	3		Route Designator 1
3	RD2	C	2		Route Designator 2
4	DATE	D	8		Date Collected
5	RESTYPE	C	1		Residence Type
6	GENTYPE	C	1		Generator Type
7	DESTNATN	C	1		Load Destination/Origin
VECLTYPE	C	1			Vehicle Type
9	TRACT1	C	5		Census Tract 1
10	TRACT2	C	5		Census Tract 2
11	RECYCLE	C	1		Recycling ?
12	HAULER	C	1		Name of Hauler
13	NUMACCTS	N	3	0	# of Accounts
14	INCOME1	N	5	0	Median Income (TRACT1)
15	INCOME2	N	5	0	Median Income (TRACT2)
16	SIZE1	N	4	2	Household Size (TRACT1)
17	SIZE2	N	4	2	Household Size (TRACT2)
25	TOTLOADWT	N	6	0	Total Load Weight
26	TOTSAMPWT	N	6	1	Total Sample Weight
18-25;28-103	components	N		2	
104	MEMO	M	10		Comments, etc.

Field Definitions and Descriptions

Each field accepts only those values or characters which were specified as valid types of input. The valid entries and allowable ranges for each field are given below. A definition of the field is also given.

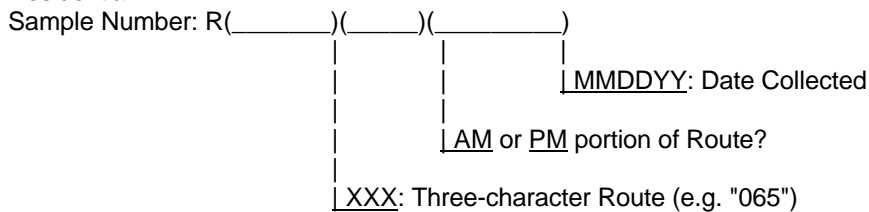
Field #	Field Name	Valid Inputs
1	LOADTYPE Load Type	R = Residential C = Commercial P = Commercial Pure S = Self Haul
2	RD1 Route Designator 1	(See Note Below)
3	RD2 Route Designator 2	(See Note Below)
4	DATE Date load was collected (not necessarily date of sample sorting)	MM/DD/YY

NOTE: SAMPLE NUMBERS

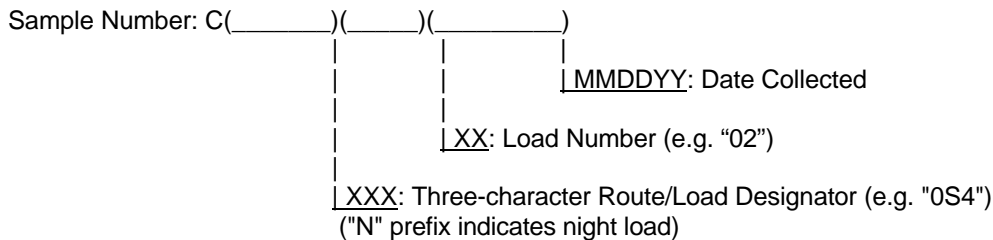
The first four fields collectively form the "Sample Number" of each record. There is no "Sample Number" field, per se. Each Sample Number is unique, providing the user with a reference identifier for any given record, during both data collation and program use. These fields are also the four sorting key variables used by the program to sequentially store unprocessed data. The default sorting hierarchy is by DATE, LOADTYPE, RD1, and RD2. All data entry files and primary databases are organized according to these key variables.

The allowable valid inputs for the RD1 and RD2 fields are specific to the LOADTYPE of each record. Route Designator 1 can be any combination of three numbers or letters; Route Designator 2 can be any combination of two numbers or letters.

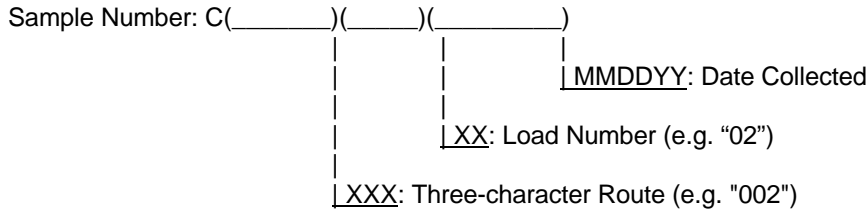
Residential



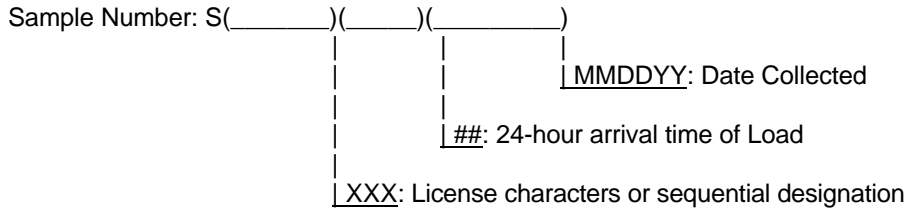
Commercial



Commercial Pure



Self Haul



5	<p>RESTYPE</p> <p>Residence Type</p>	<p>1 = Single-family</p> <p>2 = Multi Family</p> <p>X = Not Applicable</p>
6	<p>GENTYPE</p> <p>Commercial Generator Type</p>	<p>A = Manufacturer</p> <p>B = Wholesaler</p> <p>C = Retailer</p> <p>D = Restaurant/Eatery</p> <p>E = Hotel/Motel/Inn</p> <p>F = Office - Private or Government</p> <p>G = Health Facility</p> <p>H = Educational Institution</p> <p>I = Transportation Shop</p> <p>J = Other Service</p> <p>K = Mixed Generator Types</p> <p>L = Construction/Demolition</p> <p>X = Not Applicable</p>
7	<p>DESTNATN</p> <p>Origin or destination of load</p>	<p>S = South Transfer Station or residential service area</p> <p>N = North Transfer Station or residential service area</p> <p>B = Eastmont (WMI)</p> <p>L = 3rd & Lander (SD)</p>
8	<p>VECLTYPE</p> <p>Type of Vehicle which delivered the load</p>	<p>A = Passenger Auto (passenger plates)</p> <p>P = Pickup Trucks, Vans (truck plates)</p> <p>T = Other Trucks, and cars with trailers (truck plates)</p> <p>R = Rear Loader</p> <p>F = Front Loader</p>

S = Side Loader
 D = Loose Drop Box
 C = Compactor Drop Box
 X = Not Applicable

9	TRACT1	##### - a five-digit number
10	TRACT2 Census Tract(s) from which Residential or Self Haul sample was collected	corresponding to one of 130 possible census tracts. Two decimals are implied. Two tracts may be listed for each Residential Single Family Load, or one for each Self Haul Residential Load within city limits. X = Not Applicable
11	RECYCLE For Residential: For Commercial:	Y = Yes N = No X = Not Applicable Was Curbside Recycling in effect? Would the Hauler normally divert
this load for recycling?		
12	HAULER Name of residential, commercial, or commercial pure Contract Hauler	B = Bayside Disposal (WMI) S = Seattle Disposal/Emerald City G = General Disposal U= US Disposal X = Not Applicable
13	NUMACCTS Approximate Number of Residential Accounts served by the load	### - from 1 to 999 -9 = Not Applicable
14, 15	INCOME1 INCOME2 Median household income level, in dollars	##### up to 99,999 dollars

16, 17	<p>SIZE 1 SIZE 2 Household size (persons per household)</p>	### up to 9.99 person
18 ... 21	<p>CUPSOU YOGURT ENTREE TOYS Number of <i>pounds</i> found for each waste indicator category.</p>	###.## up to 999.99 lbs
22, 23, 24, 25	<p>PESTCNT APPLIR ELECTROR FILTERS Number of <i>items</i> found for each waste indicator category.</p>	### up to 9.99 items
26	<p>TOTLOADWT Total Net Weight in pounds of the Load from which the sample was taken</p>	##### up to a maximum of 999,999 lbs.
27	<p>TOTSAMPWT Total Net Weight in pounds of the Sample, derived from the sum of all component weights</p>	####.# up to a maximum of 9,999.9 lbs.
28 ... 103 Net Weight in pounds	<p>COMPONENTS 999.99 lbs each of Sample Component</p>	###.# up to a maximum of
104	<p>MEMO Field sampling comments, notes and miscellaneous information about the sample</p>	Any and all text narrative is allowed in this field. This field is not an active processing field; it is part of the total historical record of the sample.

Appendix H Hazardous Wastes, in Detail

Overview

In this appendix, the hazardous sampling components are examined in the following substreams:

- non-residential wastes, commercially collected
- non-residential wastes, self-hauled
- residential wastes, self-hauled

In addition, the total amounts of hazardous waste are examined for the following sectors, both for commercially collected and self-hauled loads:

- Construction, Demolition, Landclearing
- Education
- Health Care
- Hotel/Motel
- Manufacturing
- Office
- Restaurant
- Retail
- Transportation
- Wholesale
- Mixed Commercial Generators
- Residential (*self-haul only*)

Component Composition

Composition percentages were calculated, within a 90% confidence interval, then applied to the substream's total 1996 tonnage in order to estimate the tonnage of each hazardous material disposed. The commercial tonnage figure was provided by the City. The City also furnished the total self-haul disposal figure. However, the City does not generally track the amount of self-haul tonnage disposed according to generator type (non-residential versus residential). As a rough estimate of the tonnage contributed by the two self-haul generator types, Cascadia used the net weights of the sampled vehicles as a guide.¹ The amount of tonnage disposed by the sampled residential and non-residential self-haul vehicles was approximately equal. Therefore, the total self-haul 1996 tonnage was divided evenly between the two generator types.

Because hazardous materials are infrequently found in the sampling, and account for a very small percentage of the total disposal, the variance associated with the composition estimates is quite large. For example, as shown in Table H-1, latex paint may account for anywhere from 0.1 to 0.7% of the residential self-haul disposal—an error range of 700%. It is also important to note that the complete “hazardous” category includes several materials that would not be regulated as

¹ As described in Appendix C, the City pre-determined that one-third of the self-haul samples would be taken from automobiles and the remaining two-thirds from trucks (includes both pick-ups and larger collection trucks).

hazardous, nor legally required to be disposed separately (such as latex paint, nonhazardous glues/adhesives, etc.). For more detail regarding the specific items included in each sampling category, please refer to Appendix A.

As shown in Table H-1, hazardous materials account for a very small proportion of each substream. Given the extreme variability of the hazardous waste amounts, statistical tests were not calculated to compare results across the substreams. (It is very unlikely that any differences would be found statistically valid until a much larger number of samples had been captured.) Overall, the hazardous category accounts for just 0.4 to 0.6% of the non-residential, commercially collected substream, 0.1 to 2.6% of the non-residential self-haul substream, and 0.3 to 2.5% of the residential self-haul substream.

Table H-1 Composition of Hazardous Components, by Substream and Weight
January - December 1996
(all weights in tons)

Calculated at 90% confidence interval

	Non-Residential Commercially Collected			Non-Residential Self-Haul			Residential Self-Haul		
	Mean	Low	High	Mean	Low	High	Mean	Low	High
Latex Paints	204 0.1%	138 0.1%	270 0.1%	15 0.0%	0 0.0%	40 0.1%	161 0.4%	39 0.1%	282 0.7%
Hazardous Adhesives/Glues	33 0.0%	26 0.0%	40 0.0%	17 0.0%	0 0.0%	42 0.1%	46 0.1%	21 0.0%	71 0.2%
NonHazardous Adhesives/Glues	19 0.0%	14 0.0%	24 0.0%	198 0.5%	0 0.0%	413 1.0%	33 0.1%	3 0.0%	63 0.2%
Oil-based Paints/Solvents	51 0.0%	38 0.0%	63 0.0%	29 0.1%	0 0.0%	72 0.2%	68 0.2%	19 0.0%	116 0.3%
Cleaners	11 0.0%	9 0.0%	12 0.0%	2 0.0%	0 0.0%	5 0.0%	9 0.0%	1 0.0%	16 0.0%
Pesticides/Herbicides	0 0.0%	0 0.0%	0 0.0%	4 0.0%	0 0.0%	10 0.0%	47 0.1%	0 0.0%	97 0.2%
Dry-Cell Batteries	96 0.0%	80 0.0%	112 0.1%	11 0.0%	0 0.0%	27 0.1%	16 0.0%	3 0.0%	28 0.1%
Wet-Cell Batteries	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Gasoline/Kerosene	7 0.0%	3 0.0%	10 0.0%	0 0.0%	0 0.0%	0 0.0%	3 0.0%	0 0.0%	7 0.0%
Motor Oil/Diesel Oil	11 0.0%	7 0.0%	15 0.0%	2 0.0%	0 0.0%	5 0.0%	12 0.0%	0 0.0%	26 0.1%
Asbestos	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Explosives	0 0.0%	0 0.0%	0 0.0%	3 0.0%	0 0.0%	7 0.0%	0 0.0%	0 0.0%	0 0.0%
Other Hazardous Chemicals	394 0.2%	324 0.2%	464 0.2%	9 0.0%	1 0.0%	17 0.0%	64 0.2%	0 0.0%	141 0.3%
Other NonHazardous Chemicals	124 0.1%	78 0.0%	169 0.1%	233 0.6%	30 0.1%	436 1.0%	127 0.3%	43 0.1%	212 0.5%
Category Subtotal	949	719	1,179	523	31	1,075	584	129	1,059
Percentage of Disposal	0.5%	0.4%	0.6%	1.2%	0.1%	2.6%	1.4%	0.3%	2.5%
1996 Total Tons Disposed	193,793			41,904			41,904		
Sample Count	348			65			134		

Table H-2 presents another perspective. As shown, the mean tonnage estimates were used to calculate the percentages, within the hazardous category, instead of the total 1996 disposal. As shown, “Other Hazardous Chemicals” account for the bulk of the non-residential, commercially collected hazardous wastes; “Other NonHazardous Chemicals” account for nearly 45% of the non-residential self-haul, and latex paint and “Other NonHazardous Chemicals” are the most prevalent components of the residential self-haul hazardous wastes.¹

**Table H-2 Proportion within Hazardous Category, by Substream
January - December 1996
(all weights in tons)**

	Non-Residential <i>Commercially Collected</i>		Non-Residential <i>Self-Haul</i>		Residential <i>Self-Haul</i>	
	Mean Estimate	Mean Estimate	Mean Estimate	Mean Estimate	Mean Estimate	Mean Estimate
Latex Paints	204	21.5%	15	2.9%	161	27.5%
Hazardous Adhesives/Glues	33	3.5%	17	3.2%	46	7.8%
NonHazardous Adhesives/Glues	19	2.0%	198	37.9%	33	5.7%
Oil-based Paints/Solvents	51	5.3%	29	5.6%	68	11.6%
Cleaners	11	1.1%	2	0.3%	9	1.5%
Pesticides/Herbicides	0	0.0%	4	0.8%	47	8.0%
Dry-Cell Batteries	96	10.1%	11	2.1%	16	2.7%
Wet-Cell Batteries	0	0.0%	0	0.0%	0	0.0%
Gasoline/Kerosene	7	0.7%	0	0.0%	3	0.5%
Motor Oil/Diesel Oil	11	1.2%	2	0.3%	12	2.0%
Asbestos	0	0.0%	0	0.0%	0	0.0%
Explosives	0	0.0%	3	0.5%	0	0.0%
Other Hazardous Chemicals	394	41.5%	9	1.8%	64	10.9%
Other NonHazardous Chemicals	124	13.0%	233	44.5%	127	21.8%
Category Total	949	100.0%	523	100.0%	584	100.0%

Analysis of Loads

Hazardous materials are not frequently found in the sampling. The following charts illustrate this characteristic by showing the proportion of weight that hazardous materials comprise for each sample.²

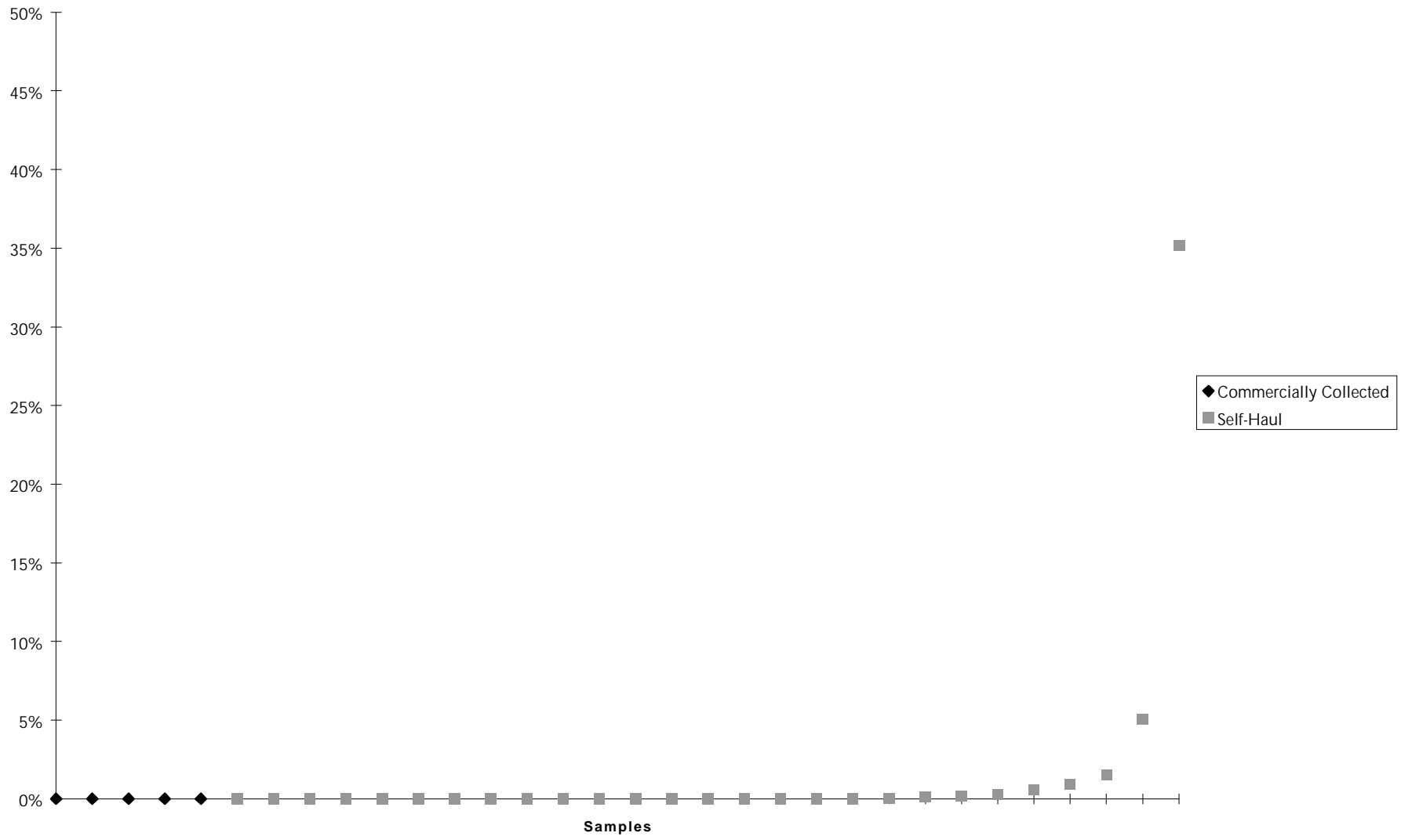
¹ “Other Hazardous Chemicals” is comprised of a variety of miscellaneous materials, including unidentifiable substances and medical waste. As noted in Appendix A, medical wastes that could be considered a bio-hazard (bloody items, sharps, etc.) were excluded from the sorts (and are rarely, if ever, found in MSW). However, it was common for the field crew to find bags of “exam room waste” from medical or dental centers that included items such as I.V. tubing and patient drapes. While not a bio-hazard, per se, these items could potentially be infectious. For the safety of the crew, these wastes were kept in the bag and weighed as one unit. “Other NonHazardous Chemicals” is also comprised of a variety of miscellaneous materials, such as non-hazardous soaps and cleaners (especially common are 5-gallon plastic tubs of hardened laundry detergent) and cosmetics.

² For example, if a total of 10 pounds of hazardous wastes was found in a 200-pound sample, that sample would be marked at 5% on the graph.

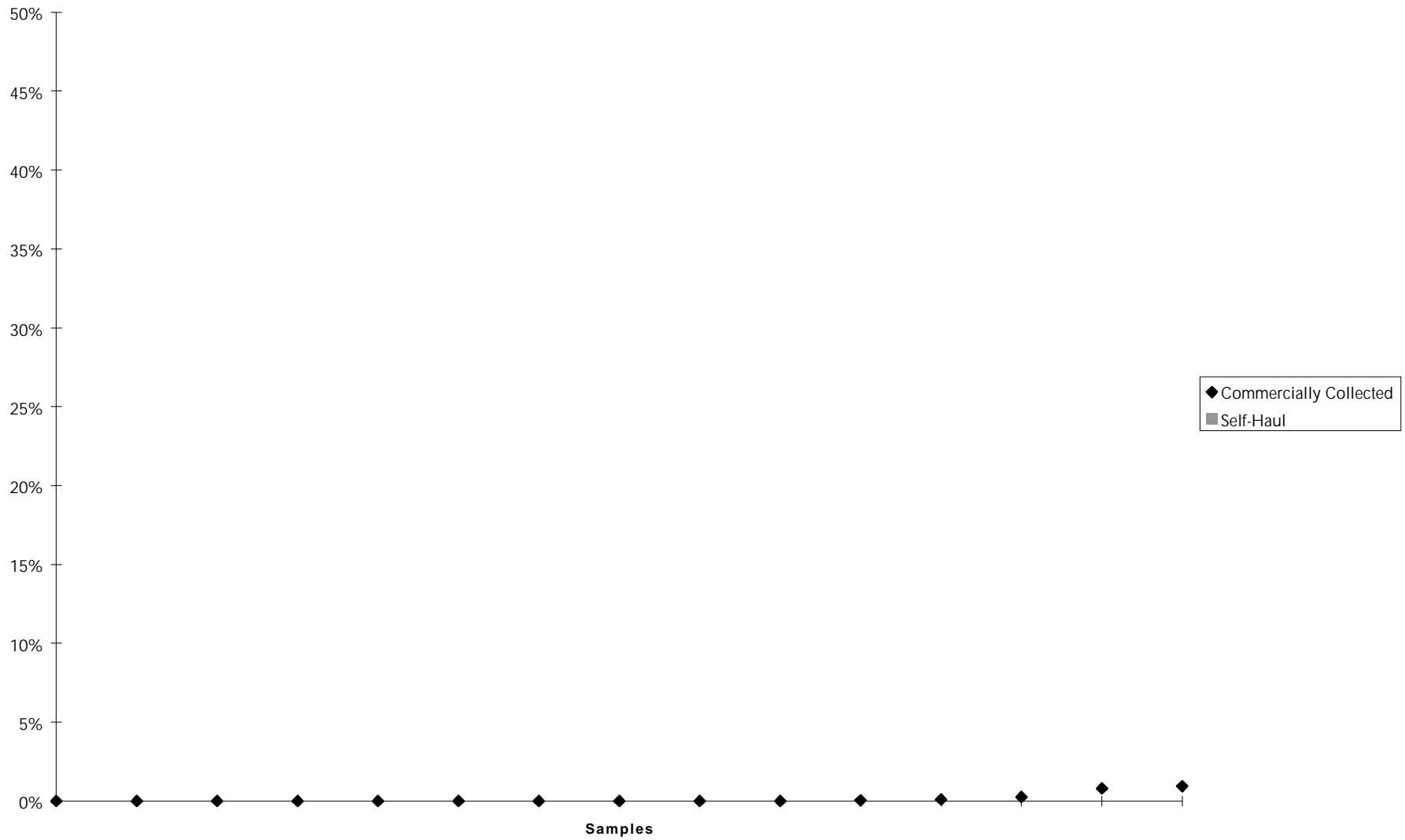
As shown in Figures H-1 through H-12, although a substantial amount of hazardous wastes³ were found in a few samples, the majority of samples did not contain any hazardous wastes at all.

³ As discussed earlier, please note that several materials that are not regulated as hazardous substances (latex paint, nonhazardous adhesives/glues, etc.) are grouped in the “hazardous” category.

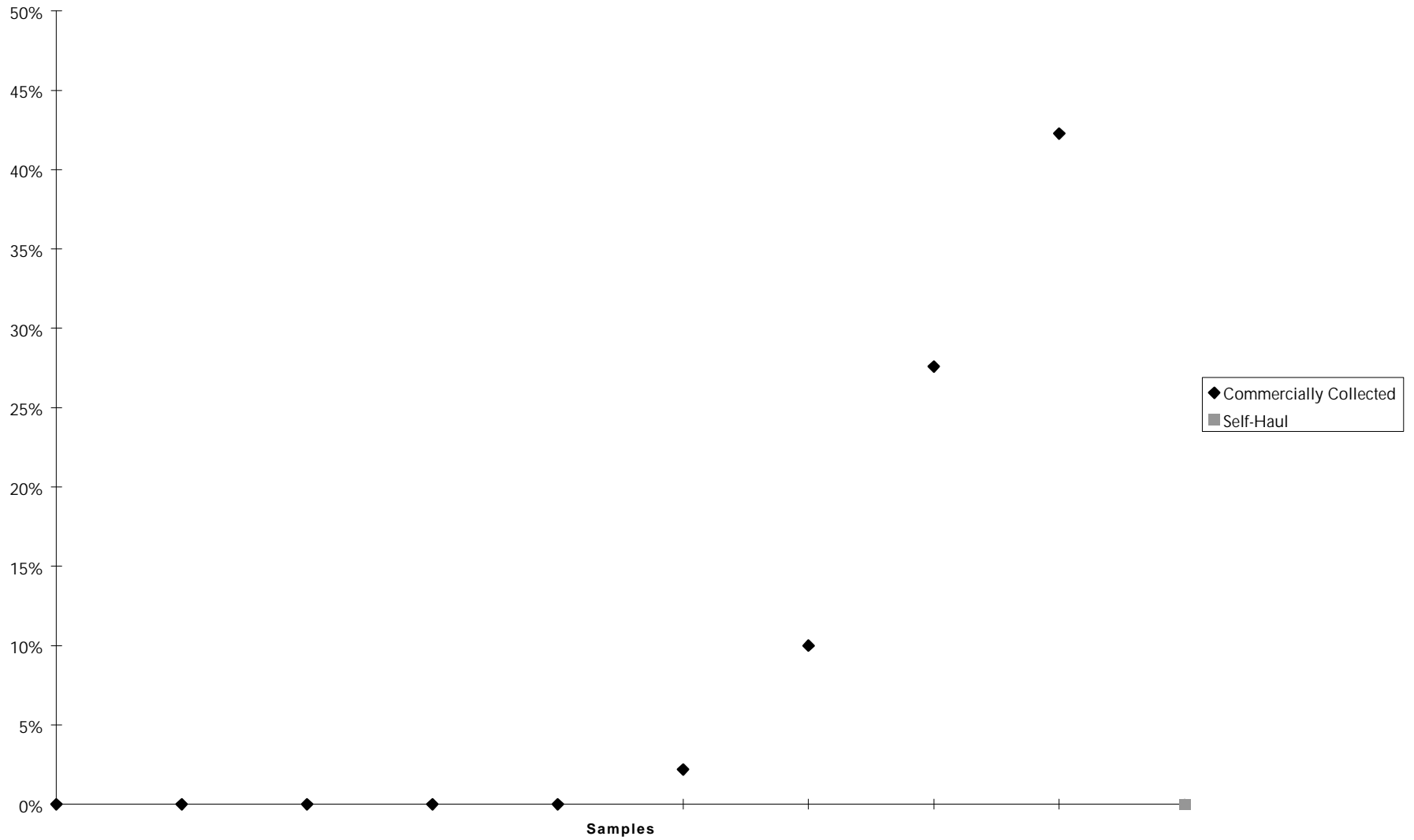
**Figure H-1 Percentage, by Weight, of Hazardous Materials to Total Sample: Construction, Demolition and Landclearing Debris
January-December 1996**



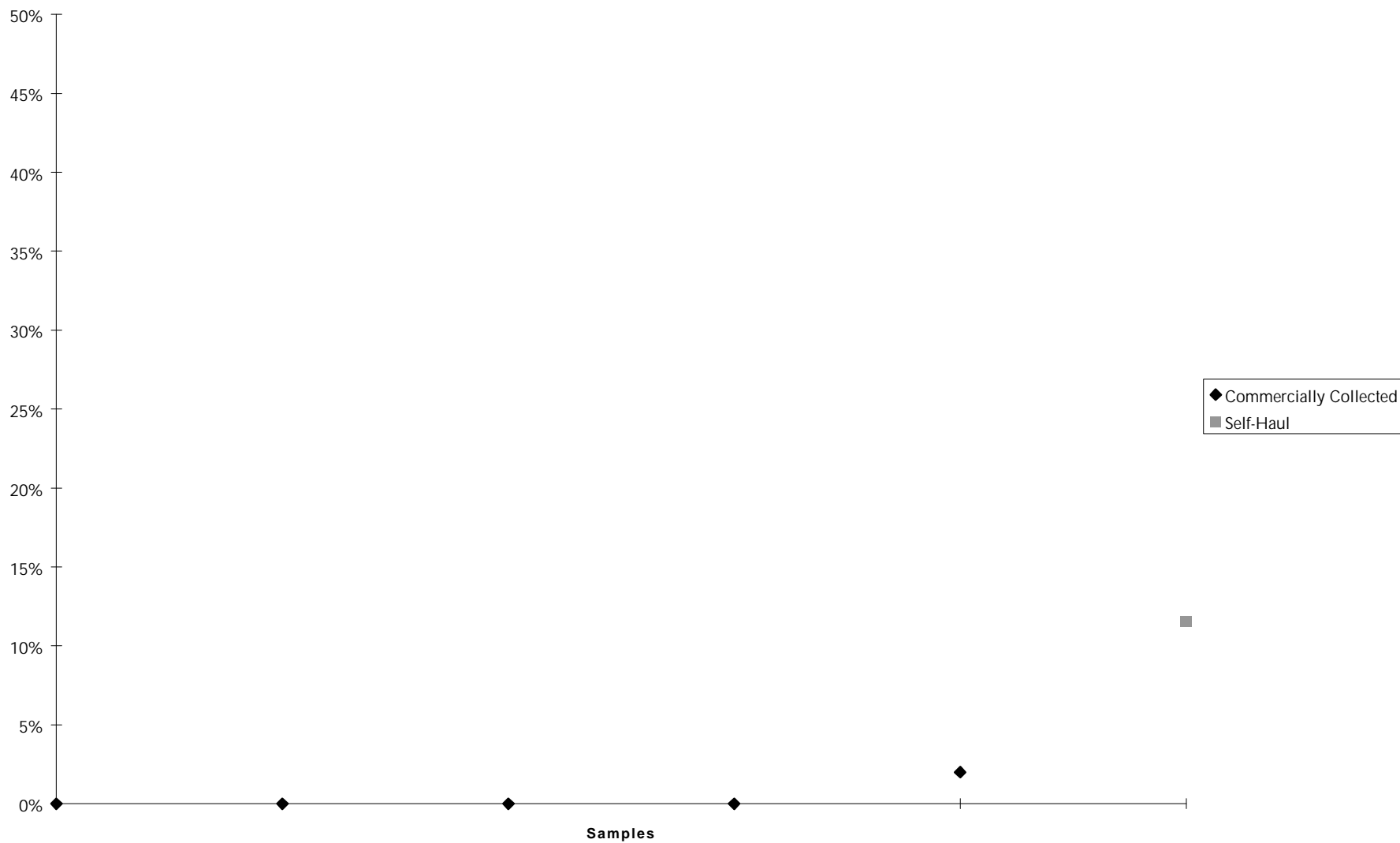
**Figure H-2 Percentage, by Weight, of Hazardous Materials to Total Sample: Education
January-December 1996**



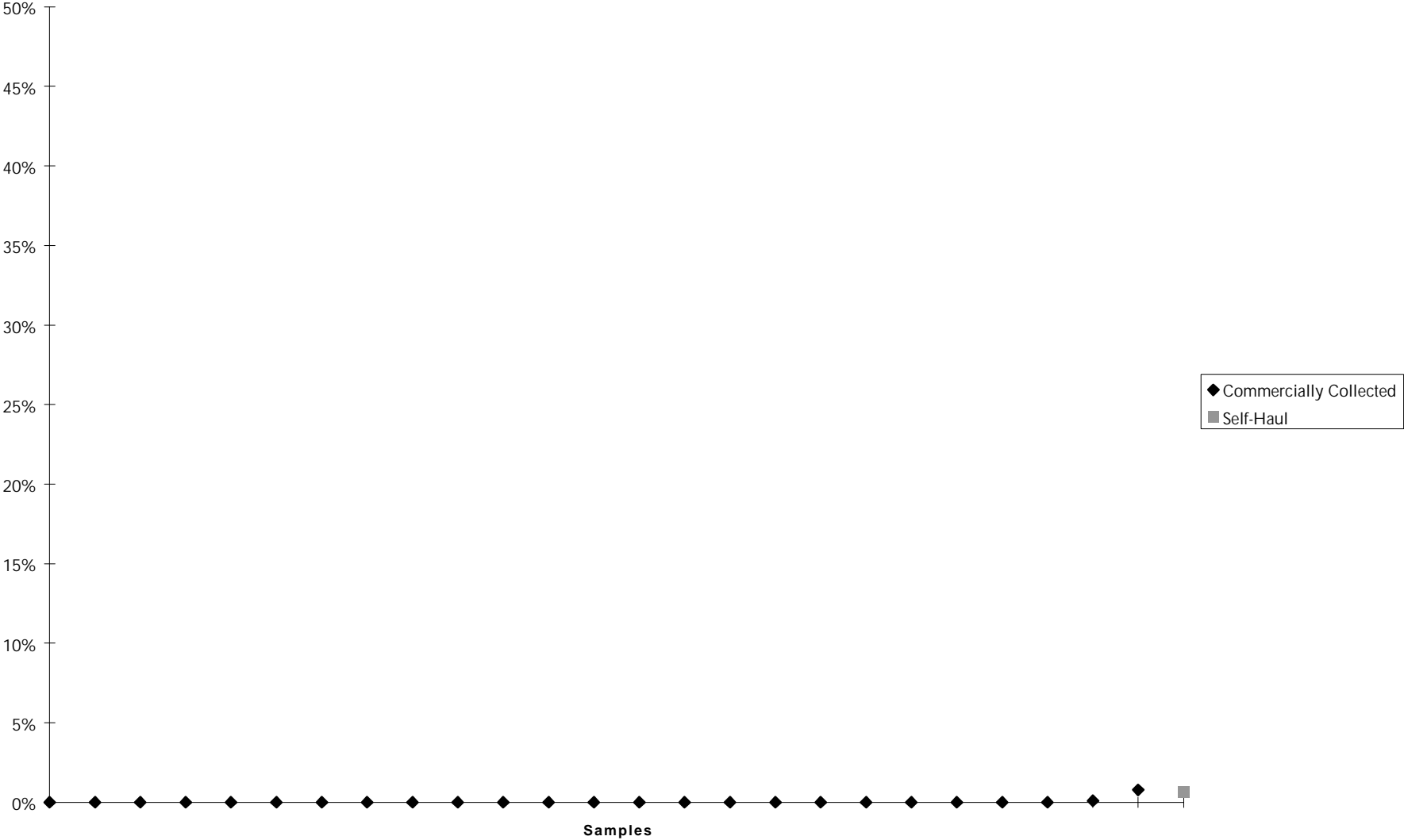
**Figure H-3 Percentage, by Weight, of Hazardous Materials to Total Sample: Health Care
January-December 1996**



**Figure H-4 Percentage, by Weight, of Hazardous Materials to Total Sample: Hotel/Motel
January-December 1996**



**Figure H-5 Percentage, by Weight, of Hazardous Materials to Total Sample: Manufacturing
January-December 1996**



**Figure H-6 Percentage, by Weight, of Hazardous Materials to Total Sample: Office
January-December 1996**

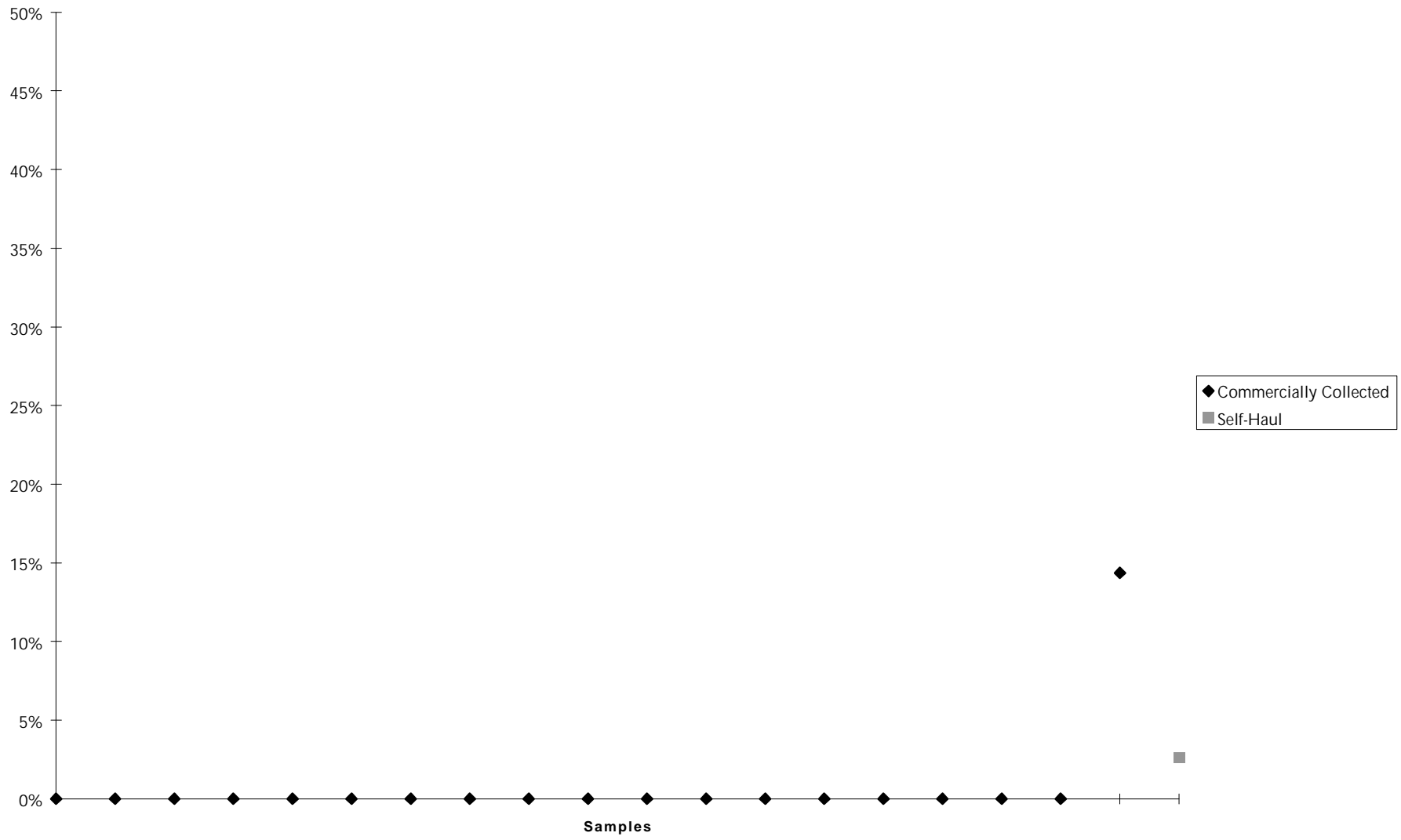
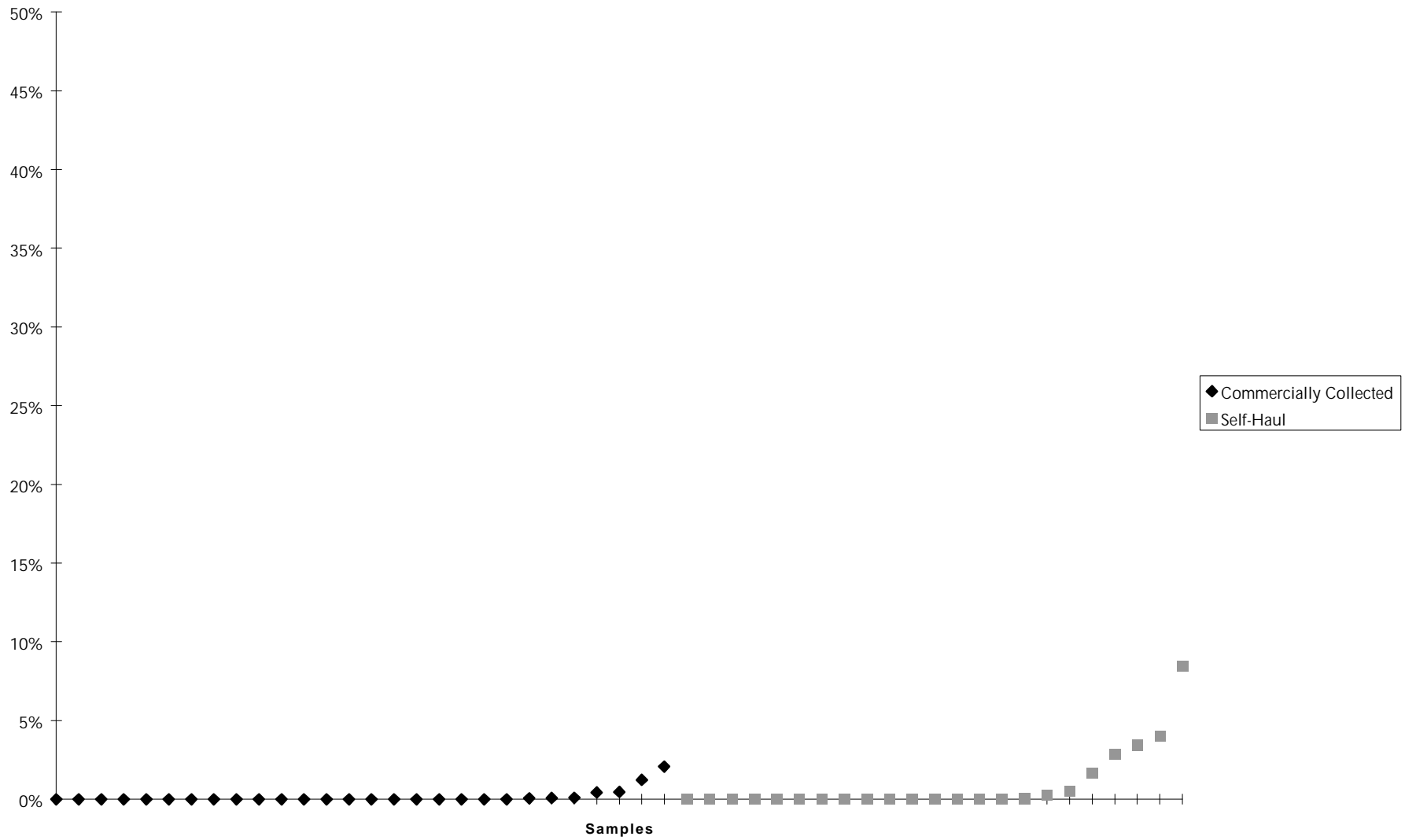


Figure H-7 Percentage, by Weight, of Hazardous Materials to Total Sample: Other Services
January-December 1996



**Figure H-8 Percentage, by Weight, of Hazardous Materials to Total Sample: Restaurant
January-December 1996**

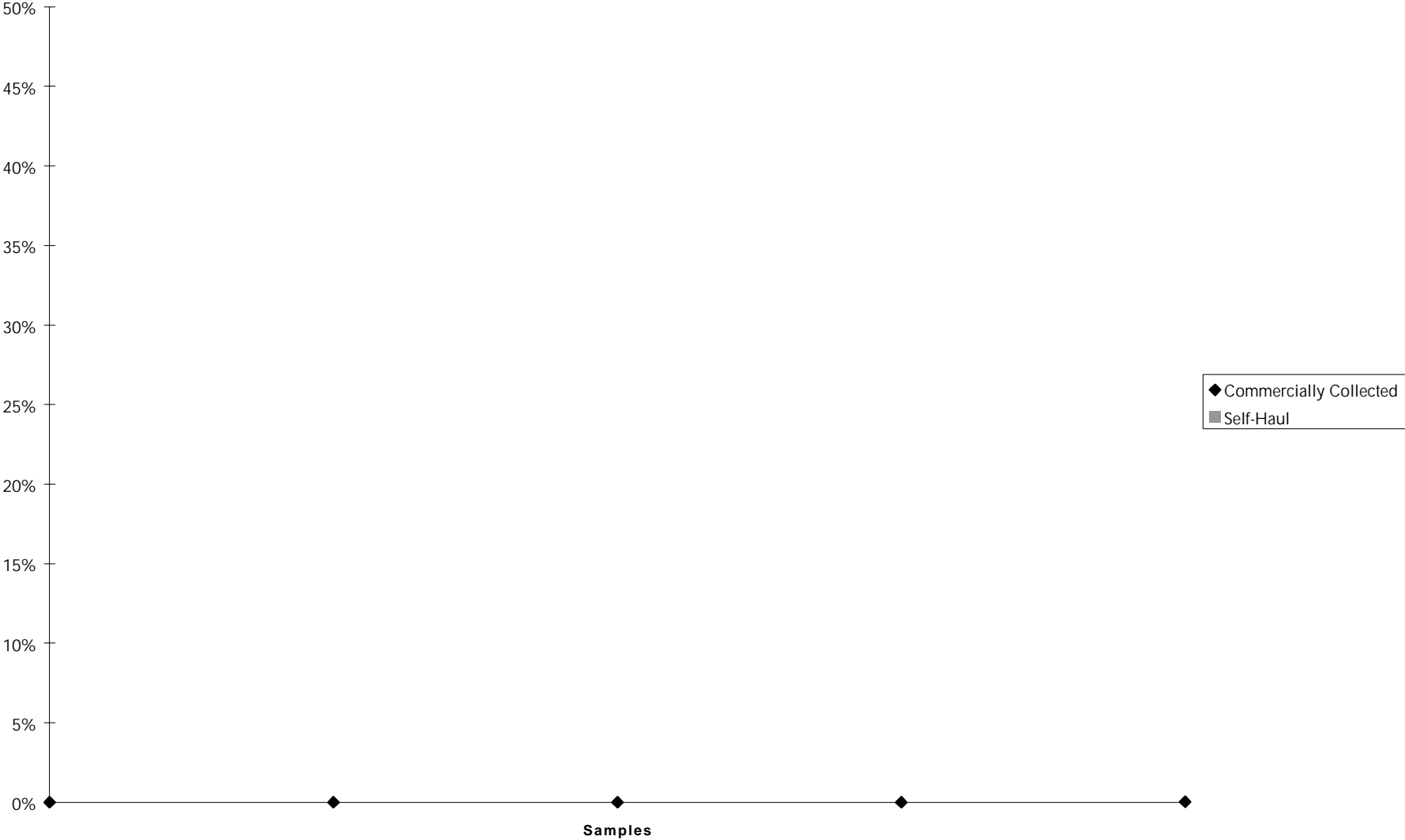
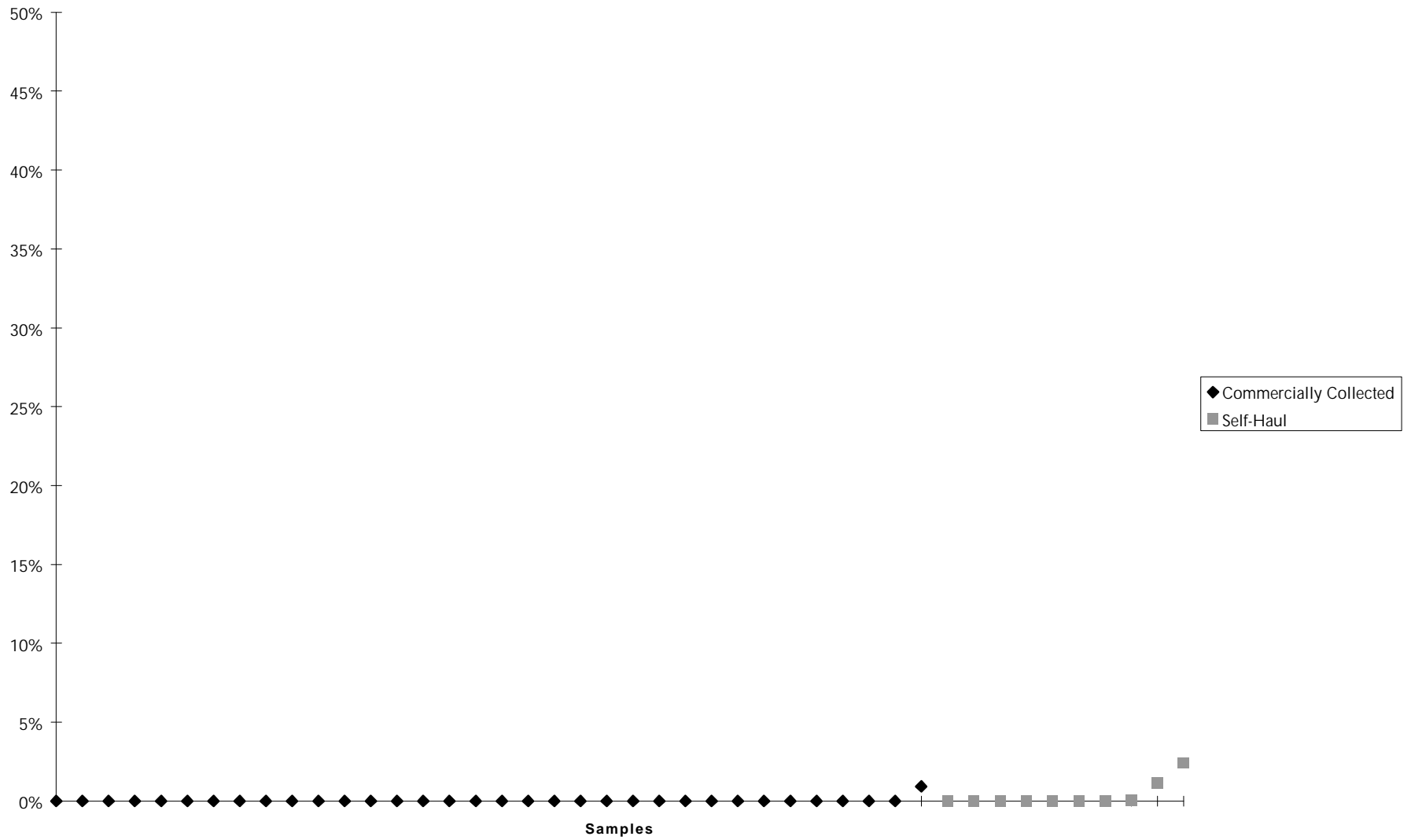
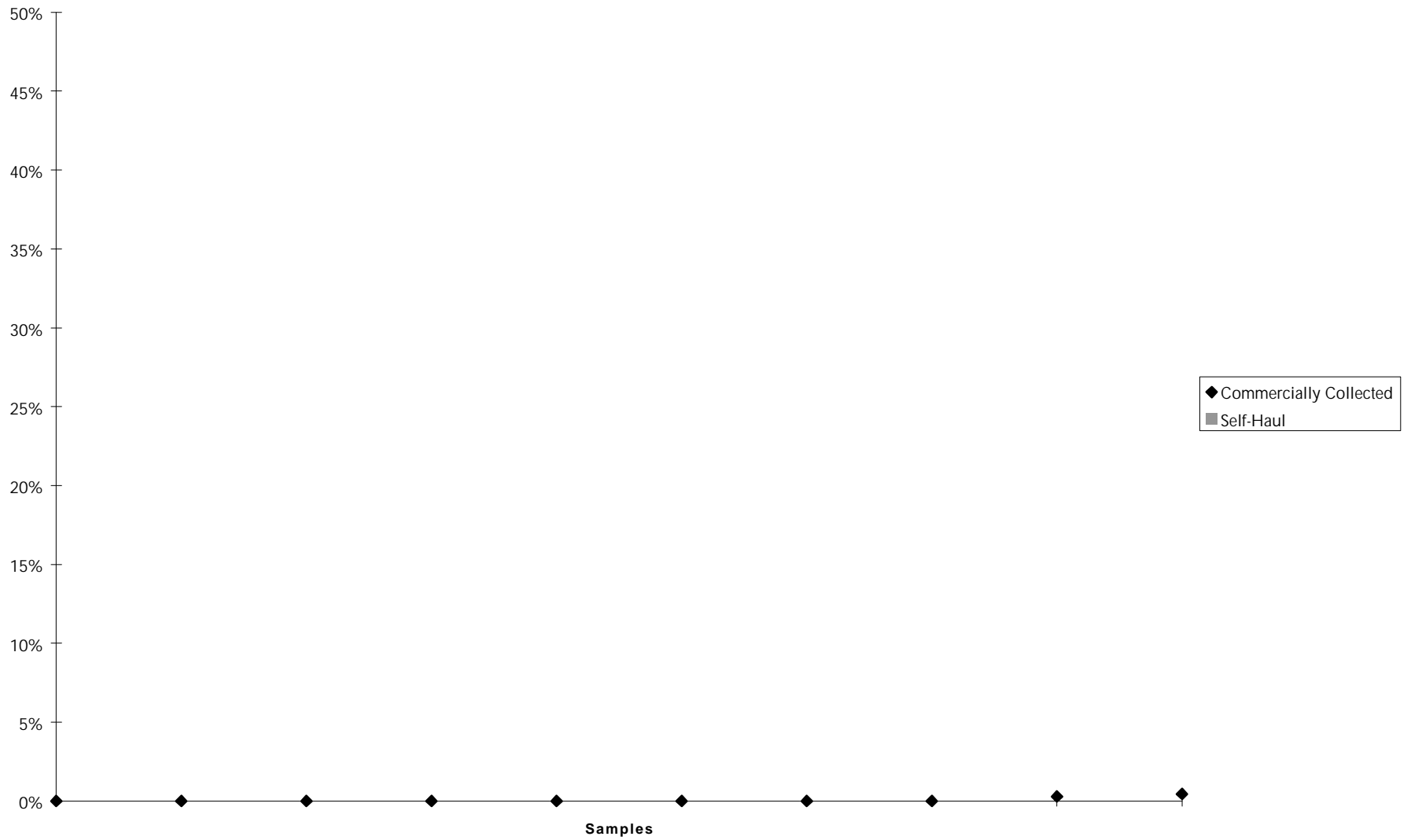


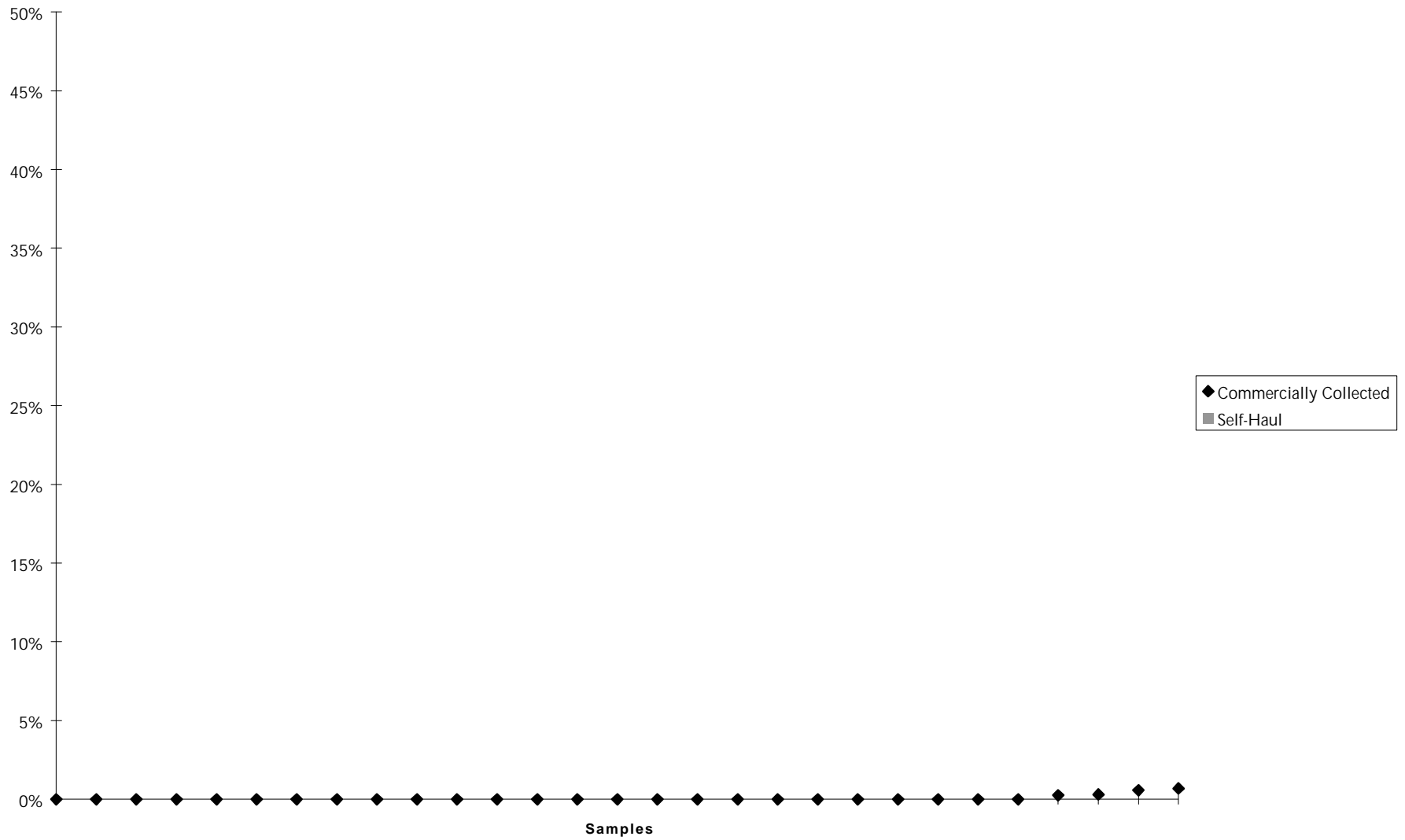
Figure H-9 Percentage, by Weight, of Hazardous Materials to Total Sample: Retail
January-December 1996



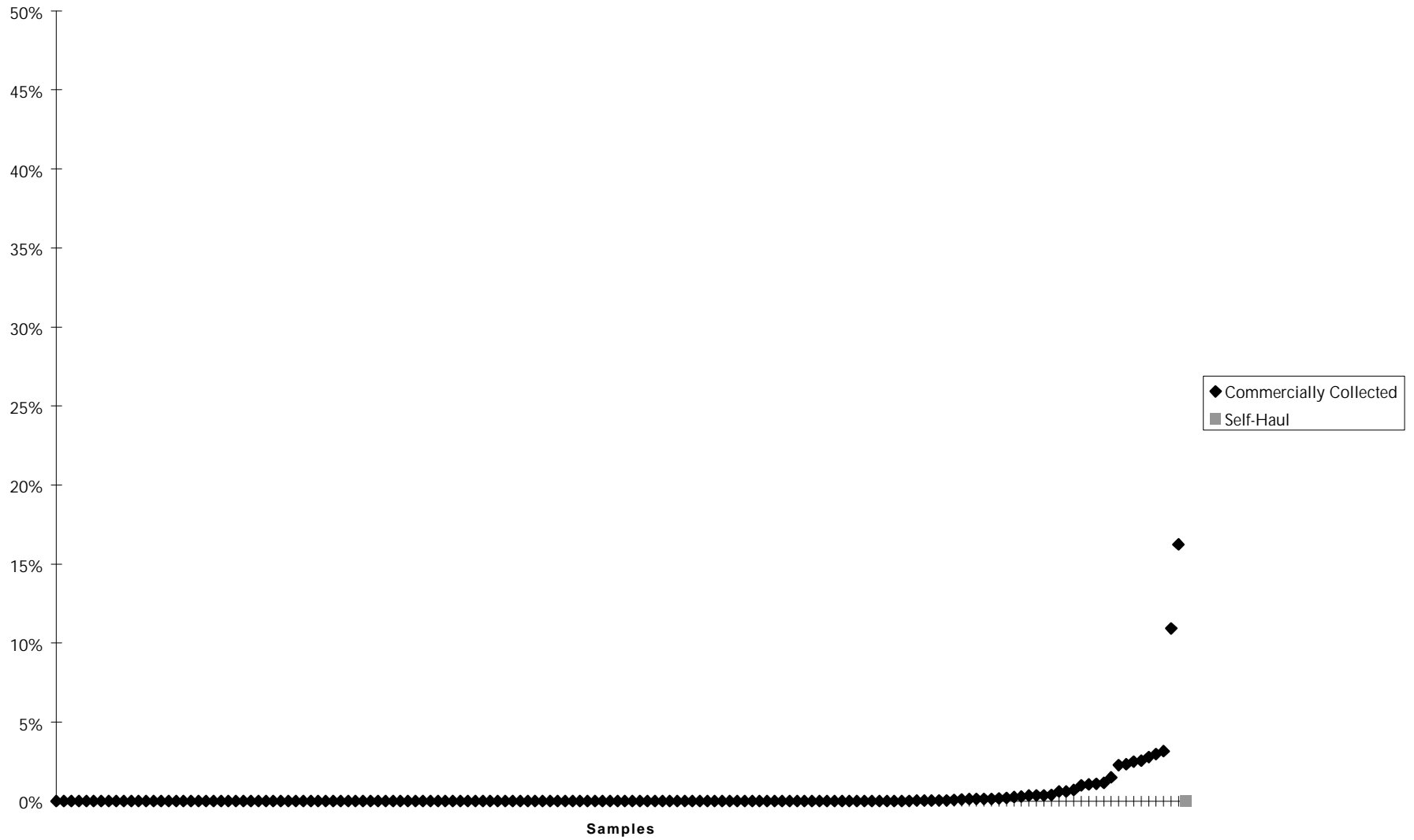
**Figure H-10 Percentage, by Weight, of Hazardous Materials to Total Sample: Transportation
January-December 1996**



**Figure H-11 Percentage, by Weight, of Hazardous Materials to Total Sample: Wholesale
January-December 1996**



**Figure H-12 Percentage, by Weight, of Hazardous Materials to Total Sample:
Mixed Commercial Generators
January-December 1996**



**Figure H-13 Percentage, by Weight, of Hazardous Materials to Total Sample: Residential
January-December 1996**

