

City of San Diego
Environmental Services Department

Waste Composition Study 1999-2000

Final Report

prepared by
Cascadia Consulting Group, Inc.
Sky Valley Associates, Inc.
Sheri Eiker-Wiles Associates

November 2000

Table of Contents

Executive Summary	1
Results	3
Interpreting the Results	3
Materials Most Heavily Represented in Disposed Waste Generated Within the City.....	3
Composition of Waste Generated Within the City of San Diego.....	5
Residential Waste	8
<i>Single-Family Residential Waste</i>	11
<i>Multifamily Residential Waste</i>	14
Commercial Waste.....	17
Military Waste.....	20
<i>Military Waste Disposed by Facilities Located Within the City</i>	20
<i>Military C&D Waste Generated Out-of-City</i>	23
City Department Waste	25
Appendix A: Tonnage Figures for Individual Strata	33
Appendix B: Material Definitions	43
<i>Paper</i>	43
<i>Glass</i>	45
<i>Metal</i>	45
<i>Plastic</i>	46
<i>Organic Materials</i>	48
<i>Construction and Demolition Materials</i>	49
<i>Household Hazardous Materials</i>	50
<i>Special Wastes</i>	51
<i>Mixed Residue</i>	52
Appendix C: Additional Waste Composition Analyses	53
Composition of Single-Family Residential Waste as a Function of the Availability of Recycling Service	53
Prevalence of Yard Waste in Single-Family Waste for Selected Areas Without Yard Waste Collection Service	63
Composition of Multifamily Residential Waste by Region.....	67
Composition of Combined Disposed Residential Waste by Season	70
Frequency of “Pure Loads” of C&D Waste at Miramar Landfill.....	74
Composition of Commercial Waste by Sector and Vehicle Type	75
Composition of Disposed Military Waste by Origin and Vehicle Type.....	83
Composition of Disposed Military Waste by Facility of Origin.....	91
Appendix D: Sampling Methodology	106
Assumptions Made for this Study	106
Sources of Disposed Waste.....	107
Allocation of Samples.....	107
Selection and Characterization of Waste Samples.....	111
Development of Composition Estimates	111
Sampling Calendar.....	113
Sorting Procedure for MSW	114
Visual Characterization Procedure for C&D Waste	115
Appendix E: Calculations	116
Composition Calculations.....	116
Weighted Averages.....	117
Comparison Calculations	117
<i>Background</i>	117

<i>Procedures Used</i>	118
<i>Statistical Considerations</i>	118
Appendix F: Field Forms	120
Appendix G: Volume to Weight Conversion Factors	124

Table of Tables

Table 1: Most Prevalent Materials Disposed by Three Major Sectors.....	4
Table 2: Tons of San Diego Waste Disposed, by Sector.....	5
Table 3: Most Prevalent Materials in Waste Generated In-City.....	6
Table 4: Overall Composition of Disposed San Diego Waste	7
Table 5: Tons of Residential Waste Disposed, by Sector.....	8
Table 6: Most Prevalent Materials in Overall Disposed Residential Waste.....	8
Table 7: Composition of Overall Disposed Residential Waste (Three Seasons Combined).....	10
Table 8: Tons of Single-family Residential Waste Disposed, by Sector.....	11
Table 9: Most Prevalent Materials in Disposed Single-family Residential Waste.....	12
Table 10: Composition of Disposed Single-family Residential Waste	13
Table 11: Tons of Multifamily Residential Waste Disposed, by Sector	14
Table 12: Most Prevalent Materials in Disposed Multifamily Residential Waste	14
Table 13: Composition of Disposed Multifamily Residential Waste.....	16
Table 14: Tons of San Diego Commercial Waste Disposed, By Sector.....	17
Table 15: Most Prevalent Materials in Disposed San Diego Commercial Waste (MSW + C&D).....	17
Table 16: Composition of Disposed San Diego Commercial Waste (MSW + C&D)	19
Table 17: Tons of Military Waste Disposed by In-City Facilities, by Sector and Vehicle Type.....	20
Table 18: Most Prevalent Materials in Disposed Military Waste Generated In-City	21
Table 19: Composition of Disposed Military Waste (MSW + C&D) Generated In-City.....	22
Table 20: Tons of Military Waste Disposed by Out-of-City Facilities, by Vehicle Type	23
Table 21: Composition of Disposed Military Waste (C&D Only) Generated Outside the City.....	24
Table 22: Tons of Waste Disposed by the City Streets Department, by Vehicle Type	25
Table 23: Composition of Waste Disposed by the City Streets Department	26
Table 24: Tons of Waste Disposed by City Schools, by Vehicle Type	27
Table 25: Composition of Waste Disposed by City Schools.....	28
Table 26: Tons of Waste Disposed by City Water and Metro Wastewater Departments, by Vehicle Type.....	29
Table 27: Composition of Waste Disposed by the City Water and Metro Wastewater Departments.....	30
Table 28: Tons of Waste Disposed by Other City Departments, by Vehicle Type	31
Table 29: Composition of Waste Disposed by Other City Departments.....	32
Table 30: Composition of Disposed Single-Family Residential Waste, North Region, Areas With Recycling Services.....	54
Table 31: Composition of Disposed Single-Family Residential Waste, North Region, Areas Without Recycling Services.....	55
Table 32: Composition of Disposed Single-Family Residential Waste, Central Region, Areas With Recycling Services.....	56
Table 33: Composition of Disposed Single-Family Residential Waste, Central Region, Areas Without Recycling Services.....	57
Table 34: Composition of Disposed Single-Family Residential Waste, South Region, Areas With Recycling Services.....	58
Table 35: Composition of Disposed Single-Family Residential Waste, South Region, Areas Without Recycling Services.....	59
Table 36: Differences in the Relative Amounts of Recyclable Materials in Single-Family Residential Waste, North Region.....	60
Table 37: Differences in the Relative Amounts of Recyclable Materials in Single-Family Residential Waste, Central Region.....	61
Table 38: Differences in the Relative Amounts of Recyclable Materials in Single-Family Residential Waste, South Region	61
Table 39: Differences in the Relative Amounts of Disposed Yard Waste, Candidate Area #1	64
Table 40: Differences in the Relative Amounts of Disposed Yard Waste, Candidate Area #2	64
Table 41: Differences in the Relative Amounts of Disposed Yard Waste, Candidate Area #3	64
Table 42: Differences in the Relative Amounts of Disposed Yard Waste, Candidate Area #4	64
Table 43: Differences in the Relative Amounts of Disposed Yard Waste, Candidate Area #5	65

Table 44: Differences in the Relative Amounts of Disposed Yard Waste, Candidate Area #6	65
Table 45: Composition of Disposed Multifamily Residential Waste, North Region	67
Table 46: Composition of Disposed Multifamily Residential Waste, Central Region.....	68
Table 47: Composition of Disposed Multifamily Residential Waste, South Region.....	69
Table 48: Composition of Combined Disposed Residential Waste, Autumn.....	71
Table 49: Composition of Combined Disposed Residential Waste, Winter	72
Table 50: Composition of Combined Disposed Residential Waste, Spring.....	73
Table 51: Frequency of C&D Pure Loads (80% or Greater) of Selected Materials	74
Table 52: Frequency of C&D Pure Loads (80% or Greater) of Combined Inert Materials	74
Table 53: Composition of Commercial MSW Disposed by In-City Generators – Open Drag-on Loads.....	75
Table 54: Composition of Commercial MSW Disposed by In-City Generators – Compactor Drag-on Loads	76
Table 55: Composition of Commercial MSW Disposed by In-City Generators – Packers and Other Vehicles.....	77
Table 56: Composition of Commercial C&D Disposed by In-City Generators – 2-Axle Trucks	78
Table 57: Composition of Commercial C&D Disposed by In-City Generators – 3-Axle Trucks	79
Table 58: Composition of Commercial C&D Disposed by In-City Generators – Semi Trucks and Packers	80
Table 59: Composition of Commercial C&D Disposed by In-City Generators – Open Drag-on Loads.....	81
Table 60: Composition of Commercial C&D Disposed by In-City Generators – Pick-up Trucks and Other Vehicles.....	82
Table 61: Composition of Disposed Military MSW Generated In-City – Packer Trucks	83
Table 62: Composition of Disposed Military MSW Generated In-City – Drag-on Loads	84
Table 63: Composition of Disposed Military C&D Waste Generated In-City – 2-axle Trucks	85
Table 64: Composition of Disposed Military C&D Waste Generated In-City – 3-axle Trucks	86
Table 65: Composition of Disposed Military C&D Waste Generated In-City – Semi Trucks.....	87
Table 66: Composition of Disposed Military C&D Waste Generated In-City – Drag-on Loads	88
Table 67: Composition of Disposed Military C&D Waste Generated Out-of-City – Semi Trucks.....	89
Table 68: Composition of Disposed Military C&D Waste Generated Out-of-City – All Other Vehicles	90
Table 69: Composition of Disposed Military C&D Waste from Specific Facilities – FASW	92
Table 70: Composition of Disposed Military C&D Waste from Specific Facilities – La Mesa NH	93
Table 71: Composition of Disposed Military C&D Waste from Specific Facilities – Lakeside NH.....	94
Table 72: Composition of Disposed Military C&D Waste from Specific Facilities – MCAS	95
Table 73: Composition of Disposed Military C&D Waste from Specific Facilities – MCRD.....	96
Table 74: Composition of Disposed Military C&D Waste from Specific Facilities – NAB Coronado	97
Table 75: Composition of Disposed Military C&D Waste from Specific Facilities – NASNI Coronado.....	98
Table 76: Composition of Disposed Military C&D Waste from Specific Facilities – NAVSTA	99
Table 77: Composition of Disposed Military C&D Waste from Specific Facilities – Navy Hospital	100
Table 78: Composition of Disposed Military C&D Waste from Specific Facilities – NRAD	101
Table 79: Composition of Disposed Military C&D Waste from Specific Facilities – NTC	102
Table 80: Composition of Disposed Military C&D Waste from Specific Facilities – OLF Imperial Beach	103
Table 81: Composition of Disposed Military C&D Waste from Specific Facilities – San Diego NH	104
Table 82: Composition of Disposed Military C&D Waste from Specific Facilities – Sub Base.....	105
Table 83: Planned vs. Actual Sample Counts.....	108
Table 84: C&D Sample Counts by Generating Sector.....	110
Table 85: Distribution of Samples by Season.....	110

Table of Figures

Figure 1: San Diego Waste Disposed, By Sector	5
Figure 2: Major Material Categories in Overall Disposed Waste	6
Figure 3: Major Material Categories in Overall Disposed Residential Waste	9
Figure 4: Major Material Categories in Disposed Single-family Residential Waste	12
Figure 5: Major Material Categories in Disposed Multifamily Residential Waste	15
Figure 6: Major Material Categories in Disposed San Diego Commercial Waste (MSW + C&D)	18
Figure 7: Major Material Categories in Disposed Military Waste Generated In-City	21
Figure 8: Candidate Areas for Comparisons of Yard Waste Prevalence	66
Figure 9: Combined Disposed Residential Waste, Autumn.....	70
Figure 10: Combined Disposed Residential Waste, Winter.....	70
Figure 11: Combined Disposed Residential Waste, Spring.....	70
Figure 12: Division of the City into Three Regions	109
Figure 13: Example of Weighting by Tons for Three Strata.....	112
Figure 14: Example of Composition Estimates for a Single Material for Three Strata	112
Figure 15: Example of Composition Calculation Using Weighted Averages.....	112
Figure 16: Overview of the Development of Composition Estimates	113
Figure 17: Waste Sampling Calendar	114

EXECUTIVE SUMMARY

Solid waste management planning and service delivery begins with knowing precisely what is in the waste stream. The City of San Diego Environmental Services Department (ESD) commissioned this waste composition study with the ultimate goal of effectively designing and enhancing waste diversion programs. This project was conducted to obtain detailed information on the amount and types of trash and recyclables being disposed by single-family residents, multi-family residents, businesses, and the military (see page 107 for a full description of these sectors). The study was conducted by a team which consisted of Cascadia Consulting Group, Inc., Sky Valley Associates, Inc., Sheri Eiker-Wiles Associates, and ESD staff. The waste was analyzed over three sampling seasons: November 1999, February/March 2000, and May 2000.

The methodology consisted of visually analyzing randomly selected loads of construction and demolition (C&D) materials, manually sorting samples from pre-determined loads of non-C&D waste, and analyzing and reporting on the data obtained from sampling. The wastes were sorted into 67 categories (see Appendix B on page 43 for a description of these categories). A detailed description of the methodology used to conduct this study, including the statistical analyses used to develop this report, is included in Appendix D (see page 106).

When comparing the results from this year Fiscal Year 2000 study to the studies conducted in 1991 and 1997, the following observations were made. The annual amount of waste disposed per capita was 1.26 tons in 1991, 1.05 tons in 1997, and has increased to 1.32 tons in 1999. This increase was due largely to increased percentages of C&D and special wastes in the waste stream. These increases can be attributed to the improved local economy, increased building/development activity, and disposal of sewage solids, which was formerly beneficially used, respectively. Excluding the sewage solids from the equation results in a 1.22 tons per capita rate for 1999. The percentages of paper, plastics, and organics in the waste stream have declined with each study, while metal and household hazardous wastes stayed the same in 1991 and 1997, and have declined since. The percentage of glass in the waste stream increased in 1997 and has declined to the same level as 1991 in this most recent study.

When analyzing the residential waste stream, the percentage of yard waste disposed increased between 1991 (when San Diego was experiencing a drought) and 1997 and has since decreased to 13.4% of the overall residential waste stream, the same level as 1991. The percentage of commodities collected in the City's curbside recycling program which are still being disposed, increased slightly from 1991 to 1997, and has since decreased to 28.1% of the overall residential waste stream, 2% less than 1991.

Six residential single-family areas were studied to specifically analyze the amount of yard waste generated in each area, to consider the feasibility of expanding yard waste collection services to these areas (see the map included as Figure 8 on page 53 in Appendix C). It was anticipated that these areas would not produce enough yard waste to justify providing yard waste collection services. ESD staff identified a reference community to use as the baseline for the percentage of yard waste that would justify providing yard waste collection services. Analyses found that four of the communities do not appear to produce enough yard waste to justify receiving yard waste collection services. One of the candidate areas

appeared to warrant collection service, and another appeared to offer selective opportunities for service.

The results contained in this report indicate that the ESD should design and enhance programs to divert additional quantities of the following materials from the waste stream: sewage solids, residential recyclable commodities (the materials collected in the City's curbside recycling program), residential yard waste, commercial paper, City department C&D, food, and commercial C&D.

RESULTS

INTERPRETING THE RESULTS

Error ranges are associated with each of the composition estimates. The precision of the calculations is influenced by the variability of the wastes and the number of samples measured. Cascadia calculated its waste composition estimates using a 90% confidence level. This means there is a 90% certainty that the actual composition is within the error range shown for each material.

Caution should be taken when comparing the composition estimates across generator types or substreams. The composition percentages are relative, while the tonnage estimates are absolute. For example, paper accounts for 31.1% of the single-family refuse along routes in the north region of San Diego that have recycling service, but it accounts for only 29.9% along similar routes in the central region. This means that paper comprises a larger portion of the north substream, but it does not necessarily mean that more paper is disposed in the north.

MATERIALS MOST HEAVILY REPRESENTED IN DISPOSED WASTE GENERATED WITHIN THE CITY

Table 1 summarizes the most prevalent waste types, by weight, for the residential, commercial, in-city military, and City department sectors of waste disposed by in-city generators. The estimates include both MSW and C&D wastes for each sector. As the table indicates, Sewage Solids, Recyclable Paper, Recyclable Yard Waste, Rock, Soil and Fines, and Food comprise the most prevalent materials disposed by these sectors.

TABLE 1: MOST PREVALENT MATERIALS DISPOSED BY MAJOR SECTORS

Material Type	Residential Waste Generated In-City		Commercial Waste Generated In-City		In-City Military Facilities		City Departments	
	Est. Pct.	Est. Tons	Est. Pct.	Est. Tons	Est. Pct.	Est. Tons	Est. Pct.	Est. Tons
Recyclable Paper	23.0%	137,099	15.0%	115,976	10.6%	10,793		
Rock, Soil and Fines			8.0%	62,291	29.7%	30,310	25.6%	53,553
Food	13.9%	82,911	6.6%	51,379	5.4%	5,465		
Sewage Solids							57.7%	120,560
Recyclable Yard Waste	13.4%	79,934	4.7%	36,194				
Treated Lumber	3.2%	18,852	7.0%	53,888	16.4%	16,695		
Remainder/Composite Paper	6.8%	40,243	5.2%	39,913				
Concrete	3.0%	17,633	5.5%	42,964	3.1%	3,157		
Non-Treated Lumber			6.5%	50,455	4.1%	4,218		
Film Plastic	3.5%	20,945	3.1%	24,238				
Carpet & Carpet Padding			5.3%	41,087				
Gypsum Board			4.7%	36,240				
Asphalt Roofing			4.3%	33,570				
Other Ferrous Metal			3.8%	29,642	3.5%	3,537		
Remainder/Composite Construction and Demolition			3.9%	29,888				
Contaminated soil, street sweepings, drain cleanings					3.6%	3,689	6.9%	14,380
Asphalt Paving							3.3%	6,836
Subtotal	66.8%	397,617	83.7%	647,724	76.3%	77,865	93.4%	195,329
All Other Waste Types	33.2%	197,212	16.3%	126,571	23.7%	24,187	6.6%	13,706
Total Disposed	100.0%	594,829	100.0%	774,295	100.0%	102,052	100.0%	209,035

COMPOSITION OF WASTE GENERATED WITHIN THE CITY OF SAN DIEGO

The composition of waste disposed by generators located within the City of San Diego was determined by considering MSW and C&D waste disposed by the residential, commercial, military, and all C&D sectors. In producing the overall waste composition profile, the composition results for each sector were weighted in proportion to the tonnage contributed by that sector to overall 1999 in-city waste disposal. The tonnages for each sector are shown in Table 2, and their relative proportions are shown in Figure 1.

TABLE 2: TONS OF SAN DIEGO WASTE DISPOSED, BY SECTOR

Sector	1999 Tons
Total MSW	1,022,755
Single-family MSW	311,246
Multifamily MSW	224,048
Commercial MSW	451,799
Military MSW	35,662
Total C&D Waste	657,455
Residential C&D	59,535
Military C&D	66,389
Commercial C&D	322,496
City Department C&D	209,035
Total In-City	1,680,211

FIGURE 1: SAN DIEGO WASTE DISPOSED, BY SECTOR

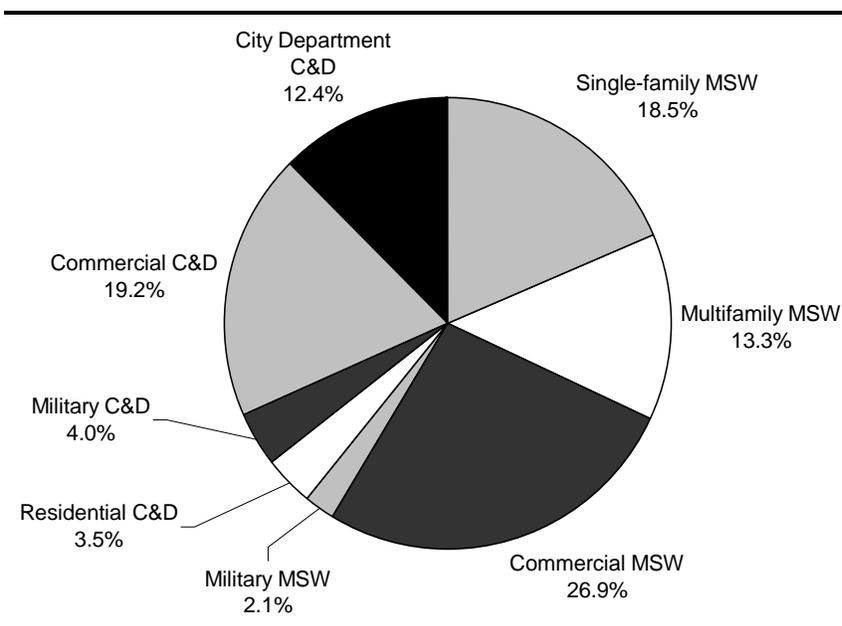


Table 3 shows the most prevalent materials that account for approximately 69% of waste disposed by generators located within the city. Figure 2 depicts the major material categories present in disposed San Diego waste, and Table 4 presents a detailed profile of the overall disposed waste stream.

TABLE 3: MOST PREVALENT MATERIALS IN WASTE GENERATED IN-CITY

Material Type	Est. Pct.	Est. Tons	Cumulative Pct.
Recyclable Paper	15.7%	263,917	15.7%
Rock, Soil and Fines	9.4%	157,887	25.1%
Food	8.3%	139,758	33.4%
Sewage Solids	7.2%	120,560	40.6%
Recyclable Yard Waste	7.2%	120,527	47.8%
Treated Lumber	5.3%	89,778	53.1%
Remainder/Composite Paper	4.9%	82,981	58.1%
Concrete	4.1%	69,435	62.2%
Non-Treated Lumber	3.8%	63,628	66.0%
Carpet & Carpet Padding	3.0%	50,463	69.0%

Definitions of recyclable materials listed in this table can be found on page 56 (Appendix C).

FIGURE 2: MAJOR MATERIAL CATEGORIES IN OVERALL DISPOSED WASTE

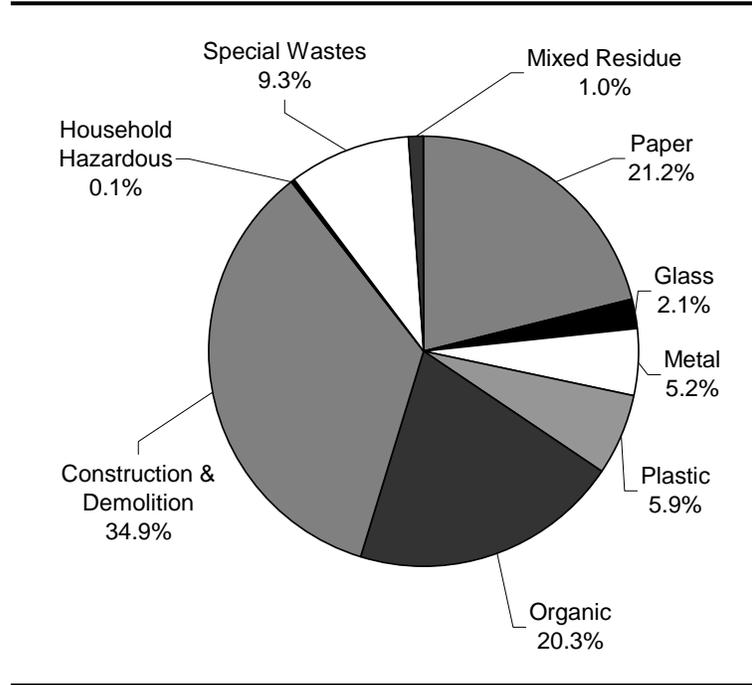


TABLE 4: OVERALL COMPOSITION OF DISPOSED SAN DIEGO WASTE

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	21.2%		356,578	ORGANIC	20.3%		341,874
Uncoated Corrugated Cardboard	5.1%	0.6%	85,299	Food	8.3%	0.7%	139,758
Waxed Corrugated Cardboard	0.6%	0.5%	9,680	Leaves and Grass	4.2%	0.7%	70,193
Paper Bags	0.5%	0.1%	9,063	Prunings and Trimmings	3.0%	0.5%	50,334
Newspaper	3.7%	0.3%	61,961	Branches and Stumps	0.9%	0.2%	15,661
White Ledger Paper	1.2%	0.2%	20,046	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.3%	0.2%	4,215	Manures	0.0%	0.0%	210
Computer Paper	0.1%	0.0%	1,148	Textiles	1.4%	0.2%	22,754
Other Office Paper	0.4%	0.1%	6,540	Diapers	1.2%	0.2%	19,740
Magazines and Catalogs	0.9%	0.1%	15,602	Remainder/Composite Organic	1.4%	0.2%	23,226
Phone Books and Directories	0.3%	0.1%	5,125	CONSTRUCTION & DEMOLITION	34.9%		586,157
Other Miscellaneous Paper	3.3%	0.5%	54,918	Concrete	4.1%	0.7%	69,435
Remainder/Composite Paper	4.9%	0.5%	82,981	Asphalt Paving	0.5%	0.2%	8,496
GLASS	2.1%		34,626	Asphalt Roofing	2.5%	0.6%	41,197
CRV Clear Bottles	0.5%	0.1%	7,757	Non-Treated Lumber	3.8%	0.8%	63,628
Non-CRV Clear Bottles and Containers	0.3%	0.1%	5,869	Treated Lumber	5.3%	0.6%	89,778
CRV Brown Bottles	0.2%	0.0%	3,923	Gypsum Board	2.6%	0.3%	43,333
Non-CRV Brown Bottles and Containers	0.0%	0.0%	422	Rock, Soil and Fines	9.4%	0.8%	157,887
CRV Other Colored Bottles	0.3%	0.1%	5,534	Contaminated soil, street sweepings, drain cleanings	1.1%	0.3%	18,014
Non-CRV & Other Colored Bottles and Containers	0.1%	0.0%	1,449	Carpet & Carpet Padding	3.0%	0.9%	50,463
Flat Glass	0.4%	0.3%	7,361	Remainder/Composite Construction and Demolition	2.6%	0.4%	43,927
Remainder/Composite Glass	0.1%	0.0%	2,310	HOUSEHOLD HAZARDOUS	0.1%		2,232
METAL	5.2%		86,682	Paint	0.0%	0.0%	144
Tin/Steel Cans	0.6%	0.1%	9,480	Vehicle and Equipment Fluids	0.0%	0.0%	36
Major Appliances	0.0%	0.0%	727	Used Oil	0.0%	0.0%	157
Other Ferrous Metal	2.6%	0.7%	43,525	Batteries	0.1%	0.0%	1,053
CRV Aluminum Cans	0.2%	0.0%	2,558	Remainder/Composite Household Hazardous	0.1%	0.0%	841
Non-CRV Aluminum Cans	0.0%	0.0%	257	SPECIAL WASTES	9.3%		155,954
Other Non-Ferrous Metal	0.3%	0.1%	4,863	Ash	0.0%	0.0%	478
Remainder/Composite Metal	1.5%	0.4%	25,272	Sewage Solids	7.2%	0.0%	120,560
PLASTIC	5.9%		98,545	Industrial Sludge	0.2%	0.2%	3,219
CRV HDPE Containers	0.2%	0.0%	3,914	Treated Medical Waste	0.1%	0.2%	2,073
Non-CRV HDPE Containers	0.1%	0.0%	1,391	Bulky Items	1.3%	0.4%	21,275
CRV PETE Containers	0.1%	0.0%	1,347	Tires	0.1%	0.1%	1,771
Non-CRV PETE Containers	0.3%	0.0%	4,970	Remainder/Composite Special Waste	0.4%	0.1%	6,578
Miscellaneous Plastic Containers	0.4%	0.1%	6,383	MIXED RESIDUE	1.0%		17,562
Film Plastic	2.8%	0.3%	46,649	Mixed Residue	1.0%	0.1%	17,562
Durable Plastic Items	0.9%	0.2%	15,357				
Remainder/Composite Plastic	1.1%	0.1%	18,533	Total Percent	100.0%		
Sample Count	1,361			Total 1999 Tons			1,680,211

RESIDENTIAL WASTE

The composition of waste disposed by residents located within the City of San Diego was determined by considering MSW and C&D waste disposed by the single-family and multifamily generator types, stratified according to region of the city (north, central or south). Additional stratification was done for single-family residential waste originating from routes that did or did not have recycling services at the time samples were taken. The tonnages for each sector are shown in Table 5.

**TABLE 5: TONS OF RESIDENTIAL WASTE
DISPOSED, BY SECTOR**

Sector	1999 Tons
Single-family MSW	311,246
<i>With recycling service</i>	172,107
<i>No recycling service</i>	139,139
Residential Self-haul C&D	59,535
Multifamily MSW	224,048
Total	594,829

Table 6 shows the most prevalent materials that account for approximately 67% of disposed residential waste. Figure 3 depicts the major material categories present in all disposed residential waste, and Table 7 presents a detailed profile of disposed residential waste. Separate analyses of residential waste for each season are presented in Appendix D.

TABLE 6: MOST PREVALENT MATERIALS IN OVERALL DISPOSED RESIDENTIAL WASTE

Material Type	Est. Pct.	Est. Tons	Cumulative Pct.
Recyclable Paper	23.0%	137,099	23.0%
Food	13.9%	82,911	37.0%
Recyclable Yard Waste	13.4%	79,934	50.4%
Remainder/Composite Paper	6.8%	40,243	57.2%
Film Plastic	3.5%	20,945	60.7%
Treated Lumber	3.2%	18,852	63.9%
Concrete	3.0%	17,633	66.8%

Definitions of recyclable materials listed in this table can be found on page 56 (Appendix C).

FIGURE 3: MAJOR MATERIAL CATEGORIES IN OVERALL DISPOSED RESIDENTIAL WASTE

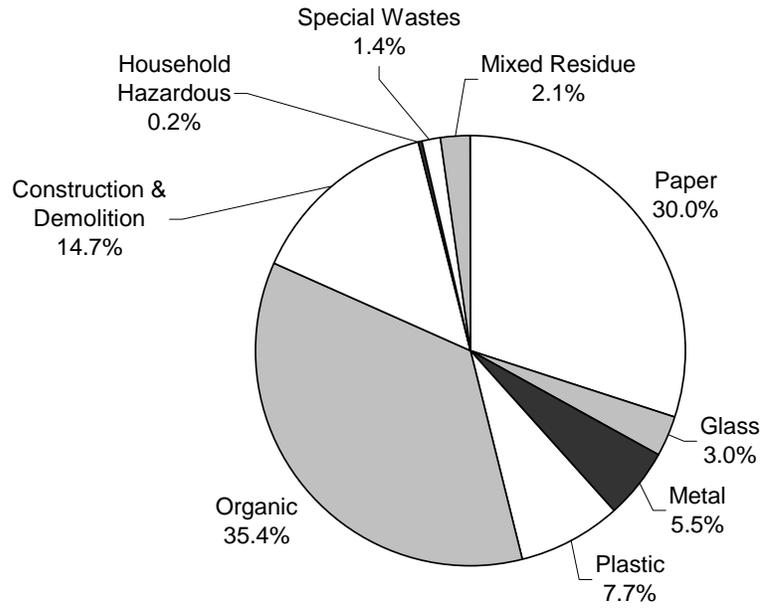


TABLE 7: COMPOSITION OF OVERALL DISPOSED RESIDENTIAL WASTE (THREE SEASONS COMBINED)

<i>Calculated at 90% confidence interval</i>	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	30.0%		178,452	ORGANIC	35.4%		210,669
Uncoated Corrugated Cardboard	5.1%	0.6%	30,187	Food	13.9%	1.1%	82,911
Waxed Corrugated Cardboard	0.2%	0.2%	1,110	Leaves and Grass	8.9%	1.6%	53,150
Paper Bags	0.8%	0.3%	5,021	Prunings and Trimmings	4.5%	1.1%	26,784
Newspaper	7.8%	0.8%	46,152	Branches and Stumps	0.7%	0.4%	4,081
White Ledger Paper	1.2%	0.2%	7,348	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.0%	1,016	Manures	0.0%	0.0%	210
Computer Paper	0.0%	0.0%	148	Textiles	2.4%	0.4%	14,138
Other Office Paper	0.7%	0.1%	4,159	Diapers	2.8%	0.4%	16,659
Magazines and Catalogs	1.8%	0.2%	10,600	Remainder/Composite Organic	2.1%	0.3%	12,736
Phone Books and Directories	0.6%	0.2%	3,338	CONSTRUCTION & DEMOLITION	14.7%		87,307
Other Miscellaneous Paper	4.9%	0.4%	29,130	Concrete	3.0%	1.4%	17,633
Remainder/Composite Paper	6.8%	0.5%	40,243	Asphalt Paving	0.0%	0.0%	0
GLASS	3.0%		17,551	Asphalt Roofing	0.9%	0.5%	5,197
CRV Clear Bottles	0.6%	0.1%	3,737	Non-Treated Lumber	1.5%	0.5%	8,760
Non-CRV Clear Bottles and Containers	0.7%	0.1%	4,050	Treated Lumber	3.2%	0.7%	18,852
CRV Brown Bottles	0.4%	0.1%	2,636	Gypsum Board	0.9%	0.4%	5,135
Non-CRV Brown Bottles and Containers	0.1%	0.0%	350	Rock, Soil and Fines	1.9%	0.6%	11,397
CRV Other Colored Bottles	0.5%	0.1%	2,953	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	184
Non-CRV & Other Colored Bottles and Containers	0.2%	0.1%	999	Carpet & Carpet Padding	1.5%	0.5%	8,989
Flat Glass	0.3%	0.2%	1,638	Remainder/Composite Construction and Demolition	1.9%	0.5%	11,159
Remainder/Composite Glass	0.2%	0.1%	1,188	HOUSEHOLD HAZARDOUS	0.2%		1,299
METAL	5.5%		32,727	Paint	0.0%	0.0%	132
Tin/Steel Cans	1.1%	0.1%	6,538	Vehicle and Equipment Fluids	0.0%	0.0%	21
Major Appliances	0.0%	0.0%	188	Used Oil	0.0%	0.0%	135
Other Ferrous Metal	1.7%	0.8%	10,049	Batteries	0.1%	0.1%	549
CRV Aluminum Cans	0.2%	0.0%	1,384	Remainder/Composite Household Hazardous	0.1%	0.0%	462
Non-CRV Aluminum Cans	0.0%	0.0%	190	SPECIAL WASTES	1.4%		8,587
Other Non-Ferrous Metal	0.4%	0.1%	2,377	Ash	0.1%	0.1%	472
Remainder/Composite Metal	2.0%	0.6%	12,002	Sewage Solids	0.0%	0.0%	0
PLASTIC	7.7%		45,621	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.3%	0.0%	1,987	Treated Medical Waste	0.0%	0.0%	55
Non-CRV HDPE Containers	0.2%	0.0%	1,057	Bulky Items	0.3%	0.2%	1,812
CRV PETE Containers	0.2%	0.0%	963	Tires	0.0%	0.0%	60
Non-CRV PETE Containers	0.5%	0.1%	3,157	Remainder/Composite Special Waste	1.0%	0.4%	6,188
Miscellaneous Plastic Containers	0.6%	0.1%	3,720	MIXED RESIDUE	2.1%		12,616
Film Plastic	3.5%	0.2%	20,945	Mixed Residue	2.1%	0.3%	12,616
Durable Plastic Items	1.0%	0.1%	6,201				
Remainder/Composite Plastic	1.3%	0.2%	7,591	Total Percent	100.0%		
Sample Count	269			Total 1999 Tons			594,829

At the request of the City, the prevalence of additional materials was estimated for sectors of MSW after the study had already begun. The characterization of the additional materials began during the winter sorting season. Based on winter and spring samples, and using the weighted averages technique described elsewhere in this report, the following estimates were calculated for overall residential MSW:

- Computer monitors (CRT's) represent approximately 13% of the remainder/composite glass that is disposed.
- Computers and other electronics containing circuit boards represent approximately 15% of disposed remainder/composite metal.
- Oil-based paint and similar coatings (e.g., varnish) represent approximately 24% of disposed paint.
- Oil filters represent approximately 66% of disposed oil.

As with all composition percents presented in this report, the above estimates reflect material weight rather than volume.

SINGLE-FAMILY RESIDENTIAL WASTE

The composition of waste disposed by single-family residents located within the City of San Diego was determined by considering MSW collected in three regions of the city as well as C&D waste disposed by the residential sector. Additional stratification was done for single-family residential waste originating from routes that did or did not have recycling services at the time samples were taken. The tonnages for each sector are shown in Table 8.

TABLE 8: TONS OF SINGLE-FAMILY RESIDENTIAL WASTE DISPOSED, BY SECTOR

Sector	1999 Tons
Single-family MSW, north	168,283
<i>With recycling service</i>	86,725
<i>No recycling service</i>	81,558
Single-family MSW, central	84,424
<i>With recycling service</i>	55,954
<i>No recycling service</i>	28,469
Single-family MSW, south	58,539
<i>With recycling service</i>	29,428
<i>No recycling service</i>	29,111
Residential self-haul C&D	59,535
Total	370,781

Table 9 shows the most prevalent materials that account for approximately 65% of disposed single-family residential waste. Figure 4 depicts the major material categories present in

disposed single-family residential waste, and Table 10 presents a detailed profile of disposed single-family residential waste.

TABLE 9: MOST PREVALENT MATERIALS IN DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE

Material Type	Est. Pct.	Est. Tons	Cumulative Pct.
Recyclable Paper	18.6%	69,081	18.6%
Recyclable Yard Waste	14.8%	54,700	33.4%
Food	13.8%	50,989	47.1%
Remainder/Composite Paper	6.3%	23,494	53.5%
Treated Lumber	4.4%	16,315	57.9%
Film Plastic	3.5%	12,859	61.3%
Concrete	3.4%	12,721	64.8%

Definitions of recyclable materials listed in this table can be found on page 56 (Appendix C).

FIGURE 4: MAJOR MATERIAL CATEGORIES IN DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE

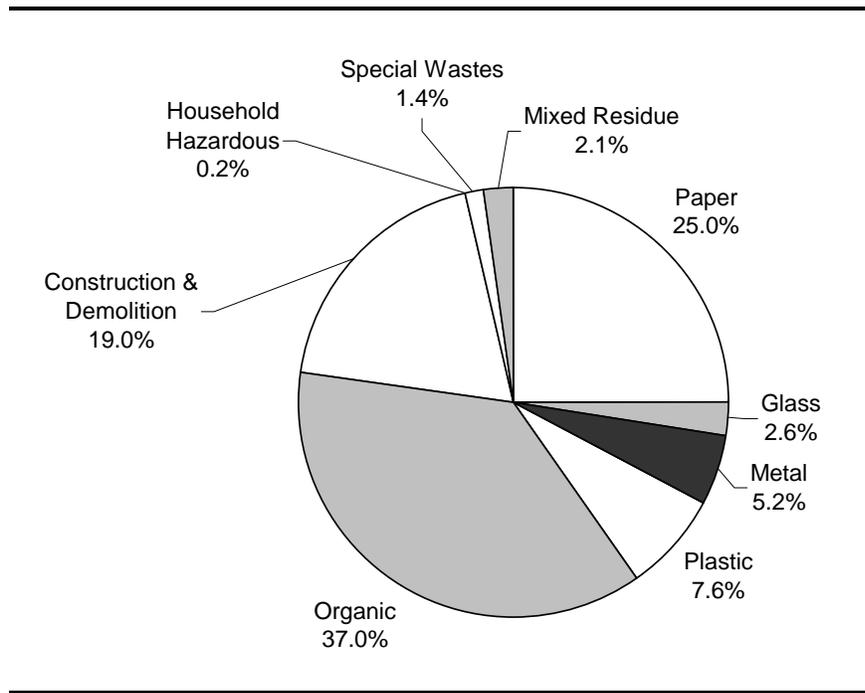


TABLE 10: COMPOSITION OF DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	25.0%		92,716	ORGANIC	37.0%		137,216
Uncoated Corrugated Cardboard	3.3%	0.4%	12,223	Food	13.8%	1.1%	50,989
Waxed Corrugated Cardboard	0.0%	0.0%	142	Leaves and Grass	10.0%	1.8%	37,175
Paper Bags	0.7%	0.1%	2,522	Prunings and Trimmings	4.7%	1.2%	17,525
Newspaper	5.8%	0.6%	21,546	Branches and Stumps	0.7%	0.4%	2,751
White Ledger Paper	1.1%	0.3%	4,162	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.0%	629	Manures	0.1%	0.1%	209
Computer Paper	0.0%	0.0%	74	Textiles	2.3%	0.5%	8,623
Other Office Paper	0.8%	0.2%	2,794	Diapers	2.9%	0.4%	10,902
Magazines and Catalogs	1.7%	0.3%	6,432	Remainder/Composite Organic	2.4%	0.5%	9,041
Phone Books and Directories	0.4%	0.2%	1,432	CONSTRUCTION & DEMOLITION	19.0%		70,375
Other Miscellaneous Paper	4.7%	0.5%	17,268	Concrete	3.4%	1.0%	12,721
Remainder/Composite Paper	6.3%	0.5%	23,494	Asphalt Paving	0.0%	0.0%	0
GLASS	2.6%		9,495	Asphalt Roofing	1.1%	0.6%	4,260
CRV Clear Bottles	0.5%	0.1%	1,678	Non-Treated Lumber	2.0%	0.8%	7,412
Non-CRV Clear Bottles and Containers	0.6%	0.1%	2,075	Treated Lumber	4.4%	1.0%	16,315
CRV Brown Bottles	0.3%	0.1%	1,063	Gypsum Board	1.3%	0.6%	4,827
Non-CRV Brown Bottles and Containers	0.1%	0.0%	234	Rock, Soil and Fines	2.7%	1.0%	9,869
CRV Other Colored Bottles	0.4%	0.1%	1,420	Contaminated soil, street sweepings, drain cleanings	0.0%	0.1%	175
Non-CRV & Other Colored Bottles and Containers	0.2%	0.1%	737	Carpet & Carpet Padding	1.3%	0.5%	4,756
Flat Glass	0.4%	0.3%	1,471	Remainder/Composite Construction and Demolition	2.7%	0.8%	10,040
Remainder/Composite Glass	0.2%	0.1%	817	HOUSEHOLD HAZARDOUS	0.2%		721
METAL	5.2%		19,128	Paint	0.0%	0.0%	125
Tin/Steel Cans	1.1%	0.1%	3,963	Vehicle and Equipment Fluids	0.0%	0.0%	21
Major Appliances	0.1%	0.0%	188	Used Oil	0.0%	0.0%	75
Other Ferrous Metal	1.9%	1.2%	7,229	Batteries	0.0%	0.0%	158
CRV Aluminum Cans	0.2%	0.0%	721	Remainder/Composite Household Hazardous	0.1%	0.1%	341
Non-CRV Aluminum Cans	0.0%	0.0%	95	SPECIAL WASTES	1.4%		5,153
Other Non-Ferrous Metal	0.4%	0.1%	1,472	Ash	0.1%	0.1%	402
Remainder/Composite Metal	1.5%	0.3%	5,460	Sewage Solids	0.0%	0.0%	0
PLASTIC	7.6%		28,131	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.3%	0.0%	1,090	Treated Medical Waste	0.0%	0.0%	54
Non-CRV HDPE Containers	0.2%	0.0%	661	Bulky Items	0.4%	0.2%	1,362
CRV PETE Containers	0.1%	0.0%	544	Tires	0.0%	0.0%	60
Non-CRV PETE Containers	0.5%	0.1%	1,957	Remainder/Composite Special Waste	0.9%	0.4%	3,275
Miscellaneous Plastic Containers	0.7%	0.1%	2,421	MIXED RESIDUE	2.1%		7,845
Film Plastic	3.5%	0.3%	12,859	Mixed Residue	2.1%	0.4%	7,845
Durable Plastic Items	1.1%	0.2%	3,948				
Remainder/Composite Plastic	1.3%	0.2%	4,652	Total Percent	100.0%		
Sample Count	215		Total 1999 Tons				370,781

MULTIFAMILY RESIDENTIAL WASTE

The composition of waste disposed by multifamily residents located within the City of San Diego was determined by analyzing specially-arranged loads of pure multifamily MSW collected in three regions of the city. The tonnages for each sector are shown in Table 11.

TABLE 11: TONS OF MULTIFAMILY RESIDENTIAL WASTE DISPOSED, BY SECTOR

Sector	1999 Tons
Multifamily, north	95,137
Multifamily, central	95,137
Multifamily, south	33,773
Total	224,048

Table 12 shows the most prevalent materials that account for approximately 70% of disposed multifamily residential waste. Figure 5 depicts the major material categories present in disposed multifamily residential waste, and Table 13 presents a detailed profile of disposed multifamily residential waste.

TABLE 12: MOST PREVALENT MATERIALS IN DISPOSED MULTIFAMILY RESIDENTIAL WASTE

Material Type	Est. Pct.	Est. Tons	Cumulative Pct.
Recyclable Paper	30.4%	68,021	30.4%
Food	14.2%	31,922	44.6%
Recyclable Yard Waste	11.3%	25,234	55.9%
Remainder/Composite Paper	7.5%	16,750	63.3%
Film Plastic	3.6%	8,087	67.0%
Recyclable Glass	3.4%	7,517	70.3%

Definitions of recyclable materials listed in this table can be found on page 56 (Appendix C).

FIGURE 5: MAJOR MATERIAL CATEGORIES IN DISPOSED MULTIFAMILY RESIDENTIAL WASTE

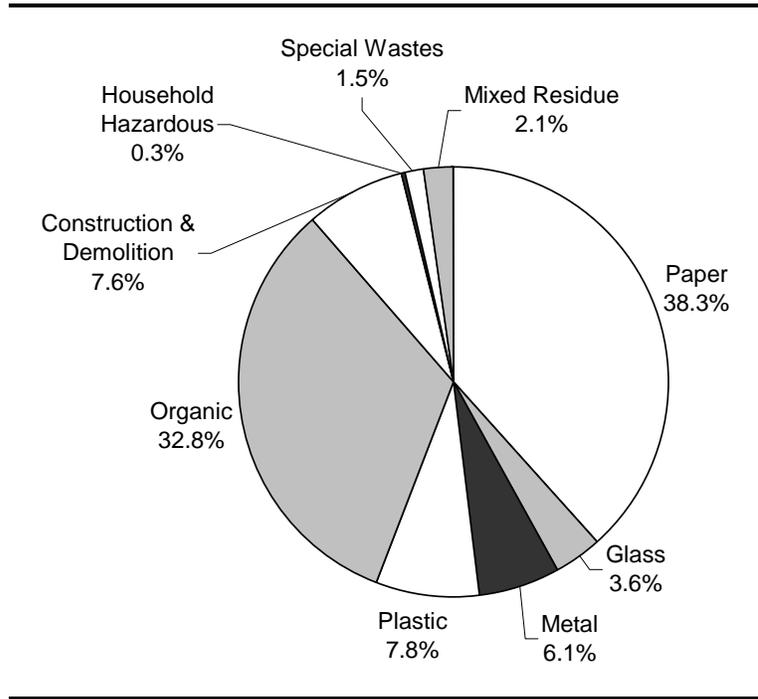


TABLE 13: COMPOSITION OF DISPOSED MULTIFAMILY RESIDENTIAL WASTE

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	38.3%		85,739	ORGANIC	32.8%		73,452
Uncoated Corrugated Cardboard	8.0%	1.5%	17,966	Food	14.2%	2.3%	31,922
Waxed Corrugated Cardboard	0.4%	0.5%	968	Leaves and Grass	7.1%	3.1%	15,975
Paper Bags	1.1%	0.7%	2,499	Prunings and Trimmings	4.1%	2.1%	9,259
Newspaper	11.0%	1.9%	24,607	Branches and Stumps	0.6%	0.7%	1,330
White Ledger Paper	1.4%	0.4%	3,186	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.1%	387	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	74	Textiles	2.5%	0.6%	5,515
Other Office Paper	0.6%	0.1%	1,365	Diapers	2.6%	0.9%	5,757
Magazines and Catalogs	1.9%	0.4%	4,168	Remainder/Composite Organic	1.6%	0.4%	3,695
Phone Books and Directories	0.9%	0.4%	1,906	CONSTRUCTION & DEMOLITION	7.6%		16,929
Other Miscellaneous Paper	5.3%	0.8%	11,862	Concrete	2.2%	3.3%	4,912
Remainder/Composite Paper	7.5%	1.0%	16,750	Asphalt Paving	0.0%	0.0%	0
GLASS	3.6%		8,056	Asphalt Roofing	0.4%	0.7%	937
CRV Clear Bottles	0.9%	0.2%	2,059	Non-Treated Lumber	0.6%	0.4%	1,348
Non-CRV Clear Bottles and Containers	0.9%	0.2%	1,975	Treated Lumber	1.1%	1.0%	2,536
CRV Brown Bottles	0.7%	0.3%	1,573	Gypsum Board	0.1%	0.2%	307
Non-CRV Brown Bottles and Containers	0.1%	0.0%	116	Rock, Soil and Fines	0.7%	0.6%	1,527
CRV Other Colored Bottles	0.7%	0.2%	1,533	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	10
Non-CRV & Other Colored Bottles and Containers	0.1%	0.1%	262	Carpet & Carpet Padding	1.9%	1.1%	4,234
Flat Glass	0.1%	0.1%	167	Remainder/Composite Construction and Demolition	0.5%	0.3%	1,119
Remainder/Composite Glass	0.2%	0.1%	372	HOUSEHOLD HAZARDOUS	0.3%		578
METAL	6.1%		13,600	Paint	0.0%	0.0%	7
Tin/Steel Cans	1.1%	0.2%	2,575	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	59
Other Ferrous Metal	1.3%	0.9%	2,820	Batteries	0.2%	0.2%	391
CRV Aluminum Cans	0.3%	0.1%	663	Remainder/Composite Household Hazardous	0.1%	0.1%	121
Non-CRV Aluminum Cans	0.0%	0.1%	95	SPECIAL WASTES	1.5%		3,434
Other Non-Ferrous Metal	0.4%	0.2%	905	Ash	0.0%	0.0%	70
Remainder/Composite Metal	2.9%	1.6%	6,542	Sewage Solids	0.0%	0.0%	0
PLASTIC	7.8%		17,489	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.4%	0.1%	897	Treated Medical Waste	0.0%	0.0%	1
Non-CRV HDPE Containers	0.2%	0.0%	396	Bulky Items	0.2%	0.2%	450
CRV PETE Containers	0.2%	0.0%	418	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.5%	0.1%	1,199	Remainder/Composite Special Waste	1.3%	0.6%	2,913
Miscellaneous Plastic Containers	0.6%	0.1%	1,299	MIXED RESIDUE	2.1%		4,771
Film Plastic	3.6%	0.5%	8,087	Mixed Residue	2.1%	0.5%	4,771
Durable Plastic Items	1.0%	0.3%	2,253				
Remainder/Composite Plastic	1.3%	0.3%	2,940	Total Percent	100.0%		
Sample Count	54			Total 1999 Tons			224,048

COMMERCIAL WASTE

The composition of commercial waste disposed by generators located within the City of San Diego was determined by considering privately-collected commercial MSW as well as C&D waste disposed by the commercial sector. Samples were stratified according to vehicle type. The tonnages for each sector are shown in Table 14.

TABLE 14: TONS OF SAN DIEGO COMMERCIAL WASTE DISPOSED, BY SECTOR

Sector	1999 Tons
Commercial MSW generated in-city	451,799
Packers	214,661
Open drag-on	130,814
Compactor drag-on	106,324
Commercial C&D generated in-city	322,496
2-axle trucks	85,258
3-axle trucks	3,114
Semi trucks or packers	32,607
Drag-on	94,524
Pickup trucks & other vehicles	106,992
Total	774,295

Table 15 shows the most prevalent materials that account for approximately 84% of disposed San Diego commercial waste. Figure 6 depicts the major material categories present in disposed San Diego commercial waste, and Table 16 presents a detailed profile of disposed San Diego commercial waste.

TABLE 15: MOST PREVALENT MATERIALS IN DISPOSED SAN DIEGO COMMERCIAL WASTE (MSW + C&D)

Material Type	Est. Pct.	Est. Tons	Cumulative Pct.
Recyclable Paper	15.0%	115,976	15.0%
Rock, Soil and Fines	8.0%	62,291	23.0%
Treated Lumber	7.0%	53,888	30.0%
Food	6.6%	51,379	36.6%
Non-Treated Lumber	6.5%	50,455	43.1%
Concrete	5.5%	42,964	48.7%
Carpet & Carpet Padding	5.3%	41,087	54.0%
Remainder/Composite Paper	5.2%	39,913	59.1%
Gypsum Board	4.7%	36,240	63.8%
Recyclable Yard Waste	4.7%	36,194	68.5%
Asphalt Roofing	4.3%	33,570	72.8%
Remainder/Composite Construction	3.9%	29,888	76.7%
Other Ferrous Metal	3.8%	29,642	80.5%
Film Plastic	3.1%	24,238	83.7%

Definitions of recyclable materials listed in this table can be found on page 56 (Appendix C).

FIGURE 6: MAJOR MATERIAL CATEGORIES IN DISPOSED SAN DIEGO COMMERCIAL WASTE (MSW + C&D)

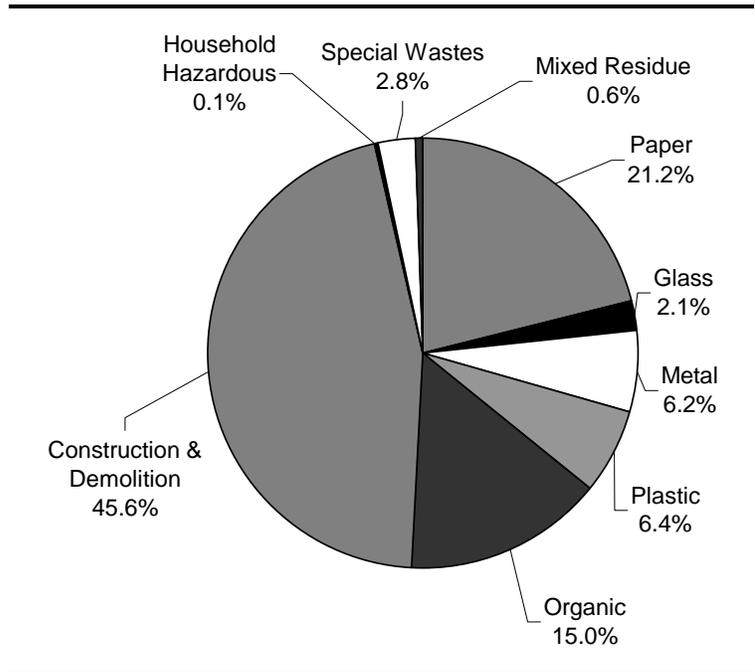


TABLE 16: COMPOSITION OF DISPOSED SAN DIEGO COMMERCIAL WASTE (MSW + C&D)

<i>Calculated at 90% confidence interval</i>			Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER			21.2%		164,186	ORGANIC	15.0%		116,254
Uncoated Corrugated Cardboard	6.6%	1.1%	51,213	Food	6.6%	1.2%	51,379		
Waxed Corrugated Cardboard	1.1%	1.0%	8,297	Leaves and Grass	2.1%	1.0%	16,553		
Paper Bags	0.4%	0.1%	3,221	Prunings and Trimmings	2.5%	0.6%	19,641		
Newspaper	1.9%	0.4%	14,519	Branches and Stumps	1.3%	0.4%	9,950		
White Ledger Paper	1.4%	0.4%	11,042	Agricultural Crop Residues	0.0%	0.0%	0		
Colored Ledger Paper	0.4%	0.4%	3,121	Manures	0.0%	0.0%	0		
Computer Paper	0.1%	0.1%	977	Textiles	0.8%	0.3%	6,459		
Other Office Paper	0.3%	0.1%	2,101	Diapers	0.4%	0.2%	2,894		
Magazines and Catalogs	0.6%	0.1%	4,366	Remainder/Composite Organic	1.2%	0.4%	9,378		
Phone Books and Directories	0.2%	0.1%	1,686	CONSTRUCTION & DEMOLITION	45.6%		352,728		
Other Miscellaneous Paper	3.1%	1.0%	23,730	Concrete	5.5%	1.0%	42,964		
Remainder/Composite Paper	5.2%	0.9%	39,913	Asphalt Paving	0.2%	0.2%	1,546		
GLASS	2.1%		15,890	Asphalt Roofing	4.3%	1.2%	33,570		
CRV Clear Bottles	0.5%	0.1%	3,533	Non-Treated Lumber	6.5%	1.6%	50,455		
Non-CRV Clear Bottles and Containers	0.2%	0.1%	1,389	Treated Lumber	7.0%	1.1%	53,888		
CRV Brown Bottles	0.2%	0.0%	1,164	Gypsum Board	4.7%	0.7%	36,240		
Non-CRV Brown Bottles and Containers	0.0%	0.0%	47	Rock, Soil and Fines	8.0%	1.4%	62,291		
CRV Other Colored Bottles	0.3%	0.2%	2,487	Contaminated soil, street sweepings, drain cleanings	0.1%	0.2%	801		
Non-CRV & Other Colored Bottles and Containers	0.1%	0.0%	450	Carpet & Carpet Padding	5.3%	1.9%	41,087		
Flat Glass	0.7%	0.5%	5,722	Remainder/Composite Construction and Demolition	3.9%	0.8%	29,888		
Remainder/Composite Glass	0.1%	0.1%	1,097	HOUSEHOLD HAZARDOUS	0.1%		908		
METAL	6.2%		48,100	Paint	0.0%	0.0%	12		
Tin/Steel Cans	0.3%	0.1%	2,638	Vehicle and Equipment Fluids	0.0%	0.0%	16		
Major Appliances	0.1%	0.1%	457	Used Oil	0.0%	0.0%	16		
Other Ferrous Metal	3.8%	1.4%	29,642	Batteries	0.1%	0.0%	489		
CRV Aluminum Cans	0.1%	0.0%	1,022	Remainder/Composite Household Hazardous	0.0%	0.0%	375		
Non-CRV Aluminum Cans	0.0%	0.0%	65	SPECIAL WASTES	2.8%		21,785		
Other Non-Ferrous Metal	0.2%	0.1%	1,788	Ash	0.0%	0.0%	6		
Remainder/Composite Metal	1.6%	0.7%	12,486	Sewage Solids	0.0%	0.0%	0		
PLASTIC	6.4%		49,878	Industrial Sludge	0.1%	0.1%	564		
CRV HDPE Containers	0.2%	0.1%	1,658	Treated Medical Waste	0.3%	0.3%	2,018		
Non-CRV HDPE Containers	0.0%	0.0%	315	Bulky Items	2.2%	0.9%	17,102		
CRV PETE Containers	0.0%	0.0%	357	Tires	0.2%	0.2%	1,705		
Non-CRV PETE Containers	0.2%	0.1%	1,726	Remainder/Composite Special Waste	0.1%	0.1%	389		
Miscellaneous Plastic Containers	0.3%	0.2%	2,548	MIXED RESIDUE	0.6%		4,566		
Film Plastic	3.1%	0.6%	24,238	Mixed Residue	0.6%	0.2%	4,566		
Durable Plastic Items	1.1%	0.4%	8,704	Total Percent	100.0%				
Remainder/Composite Plastic	1.3%	0.3%	10,331						
Sample Count	825			Total 1999 Tons			774,295		

At the request of the City, estimates were made for the prevalence of certain additional materials, starting with MSW samples obtained in the winter sorting season. Based on winter and spring samples, and using the weighted averages technique described elsewhere in this report, the following estimates were calculated for overall commercial MSW:

- Computer monitors (CRT's) were not observed in any of the commercial MSW samples.
- Computers and other electronics containing circuit boards represent approximately 22% of disposed remainder/composite metal.
- Oil-based paint and similar coatings were not observed in any of the commercial MSW samples. No water-based paint was detected in commercial MSW either.
- A single oil filter represented the only occurrence of motor oil or oil filters in commercial MSW samples.

As with all composition percents presented in this report, the above estimates reflect material weight rather than volume.

MILITARY WASTE

MILITARY WASTE DISPOSED BY FACILITIES LOCATED WITHIN THE CITY

The composition of military waste disposed by facilities located within the City of San Diego was determined by considering military MSW as well as C&D waste. Additional stratification was done according to vehicle type. The tonnages for each sector are shown in Table 17.

TABLE 17: TONS OF MILITARY WASTE DISPOSED BY IN-CITY FACILITIES, BY SECTOR AND VEHICLE TYPE

Sector	1999 Tons
MSW: Packers, Pick-up trucks, other vehicles	22,718
MSW: Open drag-on	11,875
MSW: Compactor drag-on	1,069
C&D: 2-axle trucks	4,400
C&D: 3-axle trucks	6,835
C&D: Semi trucks	47,890
C&D: Open drag-on	6,885
C&D: All other vehicles	379
Total	102,052

Table 18 shows the most prevalent materials that account for approximately 69% of disposed in-city military waste. Figure 7 depicts the major material categories present in disposed in-city military waste, and Table 19 presents a detailed profile of disposed in-city military waste.

**TABLE 18: MOST PREVALENT MATERIALS IN DISPOSED
MILITARY WASTE GENERATED IN-CITY**

Material Type	Est. Pct.	Est. Tons	Cumulative Pct.
Rock, Soil and Fines	29.7%	30,310	29.7%
Treated Lumber	16.4%	16,695	46.1%
Recyclable Paper	10.6%	10,793	56.6%
Food	5.4%	5,465	62.0%
Non-Treated Lumber	4.1%	4,218	66.1%
Contaminated soil, street sweepings	3.6%	3,689	69.7%
Other Ferrous Metal	3.5%	3,537	73.2%
Concrete	3.1%	3,157	76.3%

Definitions of recyclable materials listed in this table can be found on page 56 (Appendix C).

**FIGURE 7: MAJOR MATERIAL CATEGORIES IN
DISPOSED MILITARY WASTE GENERATED IN-CITY**

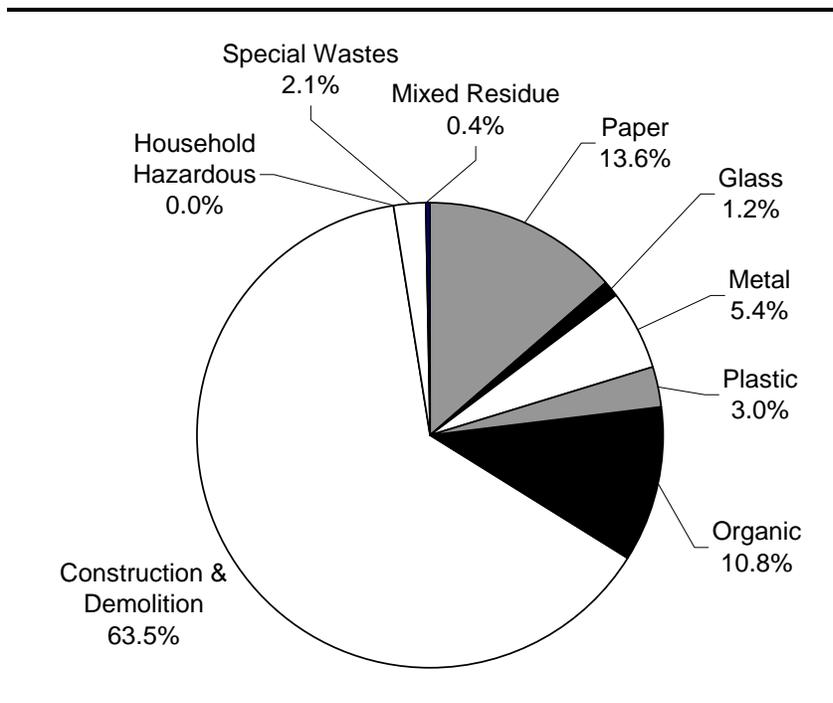


TABLE 19: COMPOSITION OF DISPOSED MILITARY WASTE (MSW + C&D) GENERATED IN-CITY

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	13.6%		13,891	ORGANIC	10.8%		11,037
Uncoated Corrugated Cardboard	3.8%	0.9%	3,857	Food	5.4%	2.2%	5,465
Waxed Corrugated Cardboard	0.3%	0.4%	274	Leaves and Grass	0.5%	0.6%	480
Paper Bags	0.8%	0.5%	819	Prunings and Trimmings	0.7%	0.7%	726
Newspaper	1.3%	0.4%	1,288	Branches and Stumps	0.9%	0.4%	878
White Ledger Paper	1.6%	1.1%	1,657	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.1%	0.1%	77	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	23	Textiles	2.1%	1.0%	2,191
Other Office Paper	0.3%	0.2%	280	Diapers	0.2%	0.2%	186
Magazines and Catalogs	0.6%	0.3%	635	Remainder/Composite Organic	1.1%	0.6%	1,111
Phone Books and Directories	0.1%	0.1%	100	CONSTRUCTION & DEMOLITION	63.5%		64,844
Other Miscellaneous Paper	2.0%	0.6%	2,057	Concrete	3.1%	1.2%	3,157
Remainder/Composite Paper	2.8%	0.6%	2,824	Asphalt Paving	0.1%	0.2%	102
GLASS	1.2%		1,183	Asphalt Roofing	1.6%	2.1%	1,618
CRV Clear Bottles	0.5%	0.2%	487	Non-Treated Lumber	4.1%	2.4%	4,218
Non-CRV Clear Bottles and Containers	0.4%	0.3%	429	Treated Lumber	16.4%	4.1%	16,695
CRV Brown Bottles	0.1%	0.1%	124	Gypsum Board	1.6%	1.0%	1,667
Non-CRV Brown Bottles and Containers	0.0%	0.0%	25	Rock, Soil and Fines	29.7%	5.3%	30,310
CRV Other Colored Bottles	0.1%	0.1%	94	Contaminated soil, street sweepings, drain cleanings	3.6%	2.8%	3,689
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.4%	0.5%	384
Flat Glass	0.0%	0.0%	1	Remainder/Composite Construction and Demolition	2.9%	0.9%	3,004
Remainder/Composite Glass	0.0%	0.0%	23	HOUSEHOLD HAZARDOUS	0.0%		25
METAL	5.4%		5,483	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.3%	0.1%	304	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.1%	0.1%	72	Used Oil	0.0%	0.0%	6
Other Ferrous Metal	3.5%	1.1%	3,537	Batteries	0.0%	0.0%	15
CRV Aluminum Cans	0.1%	0.1%	152	Remainder/Composite Household Hazardous	0.0%	0.0%	4
Non-CRV Aluminum Cans	0.0%	0.0%	2	SPECIAL WASTES	2.1%		2,182
Other Non-Ferrous Metal	0.7%	0.6%	694	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.7%	0.5%	723	Sewage Solids	0.0%	0.0%	0
PLASTIC	3.0%		3,026	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.3%	0.1%	269	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	19	Bulky Items	2.1%	1.1%	2,182
CRV PETE Containers	0.0%	0.0%	28	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.1%	0.0%	87	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.1%	0.1%	114	MIXED RESIDUE	0.4%		380
Film Plastic	1.4%	0.3%	1,463	Mixed Residue	0.4%	0.3%	380
Durable Plastic Items	0.4%	0.2%	441				
Remainder/Composite Plastic	0.6%	0.2%	604	Total Percent	100.0%		
Sample Count	87		Total 1999 Tons				102,052

MILITARY C&D WASTE GENERATED OUT-OF-CITY

The composition of military waste disposed by facilities located outside the City of San Diego was determined by considering samples of C&D waste disposed by military facilities located outside the city. Samples were stratified according to vehicle type, and the sampling results were weighted in proportion to the tonnage figures shown in Table 20. Detailed composition results are shown in Table 21.

**TABLE 20: TONS OF MILITARY WASTE DISPOSED
BY OUT-OF-CITY FACILITIES, BY VEHICLE TYPE**

Sector	1999 Tons
C&D: Semi trucks	8,533
C&D: All other vehicles	7,195
Total	15,728

TABLE 21: COMPOSITION OF DISPOSED MILITARY WASTE (C&D ONLY) GENERATED OUTSIDE THE CITY

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.7%		108	ORGANIC	1.8%		279
Uncoated Corrugated Cardboard	0.7%	1.4%	104	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.5%	0.5%	86
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	1.1%	2.0%	170
Newspaper	0.0%	0.0%	0	Branches and Stumps	0.1%	0.3%	22
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	97.5%		15,333
Other Miscellaneous Paper	0.0%	0.1%	5	Concrete	18.7%	18.5%	2,948
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	6.2%	6.9%	976
GLASS	0.0%		0	Asphalt Roofing	0.7%	1.4%	118
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.0%	0.0%	0
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	0.5%	1.0%	71
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	45.8%	19.0%	7,201
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	25.1%	25.9%	3,948
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.4%	0.7%	70
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	0.0%		0	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.0%	0.0%	0	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.0%		0
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.1%		8	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.1%	6	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	3				
Remainder/Composite Plastic	0.0%	0.0%	0	Total Percent	100.0%		
Sample Count	11			Total 1999 Tons			15,728

CITY DEPARTMENT WASTE

The composition of waste disposed by City departments was determined by sampling C&D loads hauled by City departments. Tonnage for both C&D waste and MSW was used to weight the vehicle strata as they were being combined and to extrapolate the tonnages for specific materials.

For each department or group of departments, samples were stratified according to vehicle type using the tonnage figures shown in Table 22, Table 24, Table 26, and Table 28. The composition results by department are shown in Table 23, Table 25, Table 27, and Table 29.

TABLE 22: TONS OF WASTE DISPOSED BY THE CITY STREETS DEPARTMENT, BY VEHICLE TYPE

Sector	1999 Tons
3-axle trucks	36,844
Semi trucks	158
Drag-on	127
All other vehicles	8,127
Total	45,256

TABLE 23: COMPOSITION OF WASTE DISPOSED BY THE CITY STREETS DEPARTMENT

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.0%		19	ORGANIC	1.3%		570
Uncoated Corrugated Cardboard	0.0%	0.1%	19	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	5
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	0.3%	0.2%	119
Newspaper	0.0%	0.0%	0	Branches and Stumps	1.0%	0.7%	445
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	2
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	98.3%		44,504
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	5.5%	2.4%	2,491
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	5.2%	2.6%	2,352
GLASS	0.0%		0	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.3%	0.5%	128
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	0.1%	0.1%	35
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	70.8%	6.7%	32,063
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	16.4%	6.7%	7,428
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.0%	0.0%	7
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	0.3%		130	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.3%	0.2%	125	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.1%		29
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	5	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.0%		5	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.0%	0.0%	22
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	6
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	2	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	2				
Remainder/Composite Plastic	0.0%	0.0%	0	Total Percent	100.0%		
Sample Count	119			Total 1999 Tons			45,256

**TABLE 24: TONS OF WASTE DISPOSED BY CITY
SCHOOLS, BY VEHICLE TYPE**

Sector	1999 Tons
3-axle trucks	1,575
All other vehicles	1,142
Total	2,717

TABLE 25: COMPOSITION OF WASTE DISPOSED BY CITY SCHOOLS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.0%		0	ORGANIC	0.3%		8
Uncoated Corrugated Cardboard	0.0%	0.0%	0	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	0.3%	0.5%	8
Newspaper	0.0%	0.0%	0	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	99.7%		2,709
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	9.4%	7.7%	254
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	59.4%	2.5%	1,615
GLASS	0.0%		0	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.2%	0.3%	4
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	0.0%	0.0%	0
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	30.8%	8.5%	836
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	0.0%		0	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.0%	0.0%	0	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.0%		0
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.0%		0	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	0	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	0				
Remainder/Composite Plastic	0.0%	0.0%	0	Total Percent	100.0%		
Sample Count	6			Total 1999 Tons			2,717

TABLE 26: TONS OF WASTE DISPOSED BY CITY WATER AND METRO WASTEWATER DEPARTMENTS, BY VEHICLE TYPE

Sector	1999 Tons
3-axle trucks	8,956
Semi trucks	11,020
Drag-on	5,195
Sewage solids	120,565
All other vehicles	3,356
Total	149,092

TABLE 27: COMPOSITION OF WASTE DISPOSED BY THE CITY WATER AND METRO WASTEWATER DEPARTMENTS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.0%		0	ORGANIC	0.1%		198
Uncoated Corrugated Cardboard	0.0%	0.0%	0	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	0.1%	0.2%	198
Newspaper	0.0%	0.0%	0	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	17.7%		26,407
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	1.9%	2.3%	2,813
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	1.2%	1.2%	1,814
GLASS	0.0%		0	Asphalt Roofing	0.1%	0.1%	117
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.0%	0.0%	0
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	0.0%	0.0%	49
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	11.9%	2.3%	17,709
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	2.6%	1.7%	3,905
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	0.1%		82	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.1%	0.1%	82	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	82.1%		122,396
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	80.9%	0.0%	120,565
PLASTIC	0.0%		8	Industrial Sludge	1.2%	1.6%	1,760
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.0%	0.1%	72
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	0	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	8	Total Percent	100.0%		
Remainder/Composite Plastic	0.0%	0.0%	0				
Sample Count	33			Total 1999 Tons			149,092

**TABLE 28: TONS OF WASTE DISPOSED BY OTHER
CITY DEPARTMENTS, BY VEHICLE TYPE**

Sector	1999 Tons
3-axle trucks	636
Semi trucks	10
Drag-on	7,598
All other vehicles	3,726
Total	11,971

TABLE 29: COMPOSITION OF WASTE DISPOSED BY OTHER CITY DEPARTMENTS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.2%		21	ORGANIC	26.2%		3,136
Uncoated Corrugated Cardboard	0.2%	0.3%	21	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	23.6%	19.9%	2,830
Newspaper	0.0%	0.0%	0	Branches and Stumps	2.5%	3.1%	305
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	64.7%		7,740
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	1.6%	2.0%	196
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	8.8%	14.3%	1,056
GLASS	0.0%		2	Asphalt Roofing	2.9%	5.1%	341
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.2%	0.2%	22
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	0.8%	0.7%	100
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.2%	0.3%	20
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	24.6%	16.5%	2,945
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	25.5%	24.2%	3,047
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.1%	0.2%	15
Remainder/Composite Glass	0.0%	0.0%	2	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	1.0%		122	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.1%	0.1%	10	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.5%	0.9%	56	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	7.9%		944
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.5%	0.9%	56	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.0%		5	Industrial Sludge	7.5%	13.6%	896
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.4%	0.7%	48
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	1
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	0	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	0	Total Percent	100.0%		
Remainder/Composite Plastic	0.0%	0.1%	5				
Sample Count	22			Total 1999 Tons			11,971

APPENDIX A: TONNAGE FIGURES FOR INDIVIDUAL STRATA

For this study, the waste stream was divided into individual strata that could be defined clearly and for which specific tonnage figures could be assigned. All tonnage figures were calculated by City staff for the calendar year 1999.

Each stratum was assigned an alphabetical label (A, B, C, etc.) for easy reference. The figure below indicates how the entire waste stream was divided into strata, the specific sub-components (vehicle types, generator types, etc.) that comprised each stratum, and the number of waste samples obtained from each stratum.

During the waste composition calculations, sample information and tonnage figures from individual strata were combined to produce composition estimates. For each composition table in the main body of this report, a corresponding table appears at the end of this appendix. The tables indicate which strata were included in each calculation and the relative tonnage (weighting) assigned to each stratum.

Stratum Label	Number of Samples	Stratum	1999 Tons	Sub-Components of Stratum	Sub-Component Tons
		MSW considered in this study	1,041,809		
		Residential curbside collection	535,294		
		Single-family MSW generated in-city	311,246		
		North	168,283		
A	21	Recycling service*	86,725		
B	21	No recycling service*	81,558		
		Central	84,424		
C	21	Recycling service*	55,954		
D	21	No recycling service*	28,469		
		South	58,539		
E	21	Recycling service*	29,428		
F	21	No recycling service*	29,111		
		Multifamily MSW generated in-city	224,048		
G	18	North	95,137		
H	18	Central	95,137		
I	18	South	33,773		
		Commercial MSW generated in-city	451,799		
J	36	Packers & Other	214,661		
		Privately owned front-loaders at Miramar		101,464	
		Privately owned rear-loaders at Miramar		1,124	
		Privately owned side-loaders at Miramar		10,562	
		Privately owned other vehicles at Miramar		8	
		Fee-exempt front-loaders at Miramar		59	
		Fee-exempt rear-loaders at Miramar		956	
		Privately owned front-loaders at other landfills		58,665	
		Privately owned rear-loaders at other landfills		76	
		Privately owned side-loaders at other landfills		1,537	
		Privately owned other vehicles at other landfills		40,210	
K	33	Open drag-on	130,814		
		Privately owned open drag-on at Miramar		81,279	
		Fee-exempt open drag-on at Miramar		2,508	
		Privately owned open drag-on at other landfills		47,027	
L	33	Compactor drag-on	106,324		
		Privately owned compactor drag-on at Miramar		64,112	
		Fee-exempt compactor drag-on at Miramar		5,119	
		Privately owned compactor drag-on at other landfills		37,094	
		Military MSW	54,716		
		Military MSW generated in-city	35,662		
M	9	Packers, Pickups, & Other	22,718		
		Pickup trucks		201	
		Front-loaders		19,498	
		Side-loaders		740	
		Other vehicles		2,278	
N	5	Open drag-on	11,875		
O	1	Compactor drag-on	1,069		
		Military MSW generated out-of-city	19,054		
P	0	Packers, Pickups, & Other	11,006		
		Pickup trucks		30	
		Front-loaders		9,688	
		Side-loaders		985	
		Other vehicles		303	
Q	0	Open drag-on	7,813		
R	0	Compactor drag-on	234		

Figure continued on next page.

Stratum Label	Number of Samples	Stratum	1999 Tons	Sub-Components of Stratum	Sub-Component Tons
		C&D waste considered in this study	706,113		
		— C&D disposed at Miramar	562,215		
		— Residential self-haul	42,514		
S	81	— In-city	37,487		
		— Pickup or Car	35,133		
				— C&D loads	7,467
				— MSW loads	27,666
T	8	— Large Vehicles & Drag-on	2,354		
				— 2-axle trucks, C&D loads	703
				— 3-axle trucks, C&D loads	3
				— Semi trucks, C&D loads	15
				— MSW loads not in drag-on boxes	1,619
				— Open drag-on, MSW loads	8
				— Compactor drag-on, MSW loads	5
		— Out-of-city	5,027		
U	4	— Pickup or Car	4,596		
				— C&D loads	
				— MSW loads	
V	0	— Large Vehicles & Drag-on	431		
				— 2-axle trucks, C&D loads	103
				— 3-axle trucks, C&D loads	4
				— Open drag-on, C&D loads	2
				— MSW loads	322
		— Military	82,118		
		— In-city	66,389		
W	5	— 2-Axle	4,400		
X	8	— 3-Axle	6,835		
Y	45	— Semi	47,890		
Z	13	— Open drag-on	6,885		
AA	1	— Pickups & Other	379		
				— Pickup trucks	372
				— Other vehicles	7
		— Out-of-city	15,728		
AB	2	— 2-Axle, Pickups & Other	303		
				— Pickup trucks	12
				— 2-axle trucks	286
				— Other vehicles	6
AC	1	— 3-Axle	3,970		
AD	7	— Semi	8,533		
AE	1	— Open drag-on	2,921		

Figure continued on next page.

Stratum Label	Number of Samples	Stratum	1999 Tons	Sub-Components of Stratum	Sub-Component Tons
		Commercial	228,549		
		In-city	200,646		
AF	223	2-Axle	52,063	Commercial self-haul C&D loads	52,040
				Fee-exempt C&D loads	23
AG	25	3-Axle	1,902	Commercial self-haul C&D loads	1,902
AH	68	Semi or Packer	20,152	Commercial self-haul C&D loads, semi trucks	18,287
				Fee-exempt C&D loads, semi trucks	708
				Commercial self-haul MSW, front-loaders	196
				Commercial self-haul MSW, rear-loaders	866
				Commercial self-haul MSW, side-loaders	11
				Privately owned hauler, C&D loads, semi trucks	84
AI	263	Drag-on	58,237	Commercial self-haul, C&D loads, open drag-on	8,099
				Fee-exempt, C&D loads, open drag-on	371
				Commercial self-haul, MSW loads, open drag-on	2,952
				Commercial self-haul, MSW loads, compactor drag-on	378
				Privately owned hauler, C&D loads, open drag-on	46,436
AJ	144	Pickup or Other	68,293	Commercial self-haul, C&D loads, pickup trucks	15,966
				Commercial self-haul, C&D loads, other vehicles	15
				Fee-exempt C&D loads, pickup trucks	9
				Privately owned hauler, C&D loads, other vehicles	246
				Commercial self-haul, MSW loads, pickup trucks	28,007
				Commercial self-haul, MSW loads, other vehicles	20,501
				Fee-exempt MSW loads, pickup trucks	81
				Fee-exempt MSW loads, other vehicles	3,467
		Out-of-city	27,903		
AK	23	2-Axle	5,885	Commercial self-haul, C&D loads	5,885
AL	0	3-Axle	791	Commercial self-haul, C&D loads	791
AM	15	Semi or Packer	5,472	Commercial self-haul, C&D loads, semi trucks	5,120
				Privately owned hauler, C&D loads, semi trucks	75
				Commercial self-haul, MSW loads, front-loaders	240
				Commercial self-haul, MSW loads, rear-loaders	28
				Commercial self-haul, MSW loads, side-loaders	9
AN	23	Drag-on	10,202	Commercial self-haul, C&D loads, open drag-on	845
				Privately owned hauler, C&D loads, open drag-on	8,919
				Commercial self-haul, MSW loads, open drag-on	398
				Commercial self-haul, C&D loads, compactor drag-on	39
AO	9	Pickup or Other	5,554	Commercial self-haul, C&D loads, pickup trucks	1,572
				Privately owned hauler, C&D loads, other vehicles	26
				Commercial self-haul, MSW loads, pickup trucks	1,664
				Commercial self-haul, MSW loads, other vehicles	2,292

Figure continued on next page.

Stratum Label	Number of Samples	Stratum	1999 Tons	Sub-Components of Stratum	Sub-Component Tons
		City self-haul	209,035		
		Streets	45,256		
AP	106	3-Axle	36,844	Streets Dept., C&D loads, 3-axle trucks	36,844
AQ	1	Semi	158	Streets Dept., C&D loads, semi trucks	158
AR	1	Drag-on	127		
		Streets Dept., C&D loads, open drag-on			117
		Streets Dept., MSW loads, open drag-on			10
AS	11	2-Axle, Pickup, or Other	8,127		
		Streets Dept., C&D loads, pickup trucks			12
		Streets Dept., C&D loads, 2-axle trucks			7,729
		Streets Dept., MSW loads, pickup trucks			40
		Streets Dept., MSW loads, other vehicles			345
		Schools	2,717		
AT	1	3-Axle	1,575	City Schools, C&D loads, 3-axle trucks	36,844
AU	5	All Other	1,142		
		City Schools, C&D loads, pickup trucks			11
		City Schools, C&D loads, 2-axle trucks			130
		City Schools, C&D loads, semi trucks			25
		City Schools, C&D loads, open drag-on			148
		City Schools, MSW loads, pickup trucks			41
		City Schools, MSW loads, rear-loaders			2
		City Schools, MSW loads, side-loaders			200
		City Schools, MSW loads, open drag-on			236
		City Schools, MSW loads, other vehicles			348
		Water & Metro	149,092		
AV	12	3-Axle	8,956	Water & Metro, C&D loads, 3-axle trucks	8,956
AW	3	Semi	11,020	Water & Metro, C&D loads, semi trucks	11,020
AX	4	Drag-on	5,195		
		Water & Metro, C&D loads, open drag-on			2,260
		Water & Metro, MSW loads, open drag-on			2,935
AY	13	2-Axle, Pickup, or Other	3,356		
		Water & Metro, C&D loads, pickup trucks			2
		Water & Metro, C&D loads, 2-axle			3,036
		Water & Metro, MSW loads, other vehicles			319
BK	1	Sewage solids	120,565		
		Other City Departments	11,971		
AZ	8	3-Axle	636		
		Parks Dept., C&D loads, 3-axle trucks			616
		Other Dept., C&D loads, 3-axle trucks			21
BA	2	Semi	10	Parks Dept., C&D loads, semi trucks	10
BB	5	Drag-on	7,598		
		Parks Dept., C&D loads, open drag-on			58
		Environ. Programs, C&D loads, open drag-on			1,834
		Parks Dept., MSW loads, open drag-on			680
		Environ. Programs, MSW loads, open drag-on			5,020
		Environ. Programs, MSW loads, compactor drag-on			6
BC	7	All Other	3,726		
		Parks Dept., C&D loads, pickup trucks			4
		Parks Dept., C&D loads, 2-axle trucks			51
		City Collections, C&D loads, 2-axle trucks			1
		City Collections, C&D loads, other vehicles			12
		Environ. Programs, C&D loads, 2-axle trucks			62
		Environ. Programs, C&D loads, other vehicles			7
		Other Dept., C&D loads, pickup trucks			3
		Other Dept., C&D loads, 2-axle trucks			149
		Parks Dept., MSW loads, pickup trucks			120
		Parks Dept., MSW loads, rear-loaders			6
		Parks Dept., MSW loads, side-loaders			576
		Parks Dept., MSW loads, other vehicles			1,003
		Environ. Programs, MSW loads, pickup trucks			2
		Environ. Programs, MSW loads, front-loaders			2
		Environ. Programs, MSW loads, rear-loaders			1,480
		Environ. Programs, MSW loads, other vehicles			86
		Other Dept., MSW loads, pickup trucks			35
		Other Dept., MSW loads, other vehicles			150

Figure continued on next page.

Stratum Label	Number of Samples	Stratum	1999 Tons	Sub-Components of Stratum	Sub-Component Tons
		C&D disposed at other landfills	143,898		
		Residential self-haul	22,048		
BD	0	In-city	22,048		
		Pickup or Car	20,678		
				Res. self-haul, C&D loads, pickup trucks	4,672
BE	0	Large Vehicles & Drag-on	1,370		
				Res. self-haul, MSW loads, pickup trucks	16,006
		Commercial	121,850		
		In-city	121,850		
BF	0	2-Axle	33,195	Commercial self-haul, C&D loads, 2-axle trucks	33,195
BG	0	3-Axle	1,213	Commercial self-haul, C&D loads, 3-axle trucks	1,213
BH	0	Semi	12,455		
				Commercial self-haul, C&D loads, semi trucks	11,665
				Privately owned hauler, C&D loads, semi trucks	53
				Commercial self-haul, MSW loads, front-loaders	113
				Commercial self-haul, MSW loads, rear-loaders	503
				Commercial self-haul, MSW loads, side-loaders	122
BI	0	Drag-on	36,288		
				Commercial self-haul, C&D loads, open drag-on	5,166
				Privately owned hauler, C&D loads, open drag-on	29,058
				Commercial self-haul, MSW loads, open drag-on	1,845
BJ	0	Pickup or Other	38,700		
				Commercial self-haul, C&D loads, pickup trucks	10,200
				Commercial self-haul, C&D loads, other vehicles	10
				Privately owned hauler, C&D loads, other vehicles	154
				Commercial self-haul, MSW loads, pickup trucks	16,273
				Commercial self-haul, MSW loads, other vehicles	12,063

* Single-family residential curbside tonnage figures were calculated by City staff for each region. These figures were broken down further based on the number of known residential waste collection and recycling collection accounts in each region.

Tons of San Diego Waste Disposed, by Sector

Sector	Strata Included*	1999 Tons
Single-family MSW	A, B, C, D, E, F	311,246
Multifamily MSW	G, H, I	224,048
Commercial MSW	J, K, L	451,799
Military MSW	M, N, O	35,662
Residential C&D	S, T, BD, BE	59,535
Military C&D	W, X, Y, Z, AA	66,389
Commercial C&D	AF, AG, AH, AI, AJ, BF, BG, BH, BI, BJ	322,496
City Department C&D	AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, BK, AZ, BA, BB, BC	209,035
Total		1,680,211

Tons of Residential Waste Disposed, by Sector

Sector	Strata Included*	1999 Tons
Single-family MSW		311,246
<i>With recycling service</i>	A, C, E	172,107
<i>No recycling service</i>	B, D, F	139,139
Residential Self-haul C&D	S, T, BD, BE	59,535
Multifamily MSW	G, H, I	224,048
Total		594,829

Tons of Single-family Residential Waste Disposed, by Sector

Sector	Strata Included*	1999 Tons
Single-family MSW, north		168,283
<i>With recycling service</i>	A	86,725
<i>No recycling service</i>	B	81,558
Single-family MSW, central		84,424
<i>With recycling service</i>	C	55,954
<i>No recycling service</i>	D	28,469
Single-family MSW, south		58,539
<i>With recycling service</i>	E	29,428
<i>No recycling service</i>	F	29,111
Residential self-haul C&D	S, T, BD, BE	59,535
Total		370,781

Tons of Multifamily Residential Waste Disposed, by Sector

Sector	Strata Included*	1999 Tons
Multifamily, north	G	95,137
Multifamily, central	H	95,137
Multifamily, south	I	33,773
Total		224,048

Tons of San Diego Commercial Waste Disposed, by Sector

Sector	Strata Included*	1999 Tons
Commercial MSW generated in-city		451,799
Packers	J	214,661
Open drag-on	K	130,814
Compactor drag-on	L	106,324
Commercial C&D generated in-city		322,496
2-axle trucks	AF, BF	85,258
3-axle trucks	AG, BG	3,114
Semi trucks or packers	AH, BH	32,607
Drag-on	AI, BI	94,524
Pickup trucks & other vehicles	AJ, BJ	106,992
Total		774,295

Tons of Military Waste Disposed by In-City Facilities, by Sector and Vehicle Type

Sector	Strata Included*	1999 Tons
MSW: Packers, Pick-up trucks, other vehicles	M	22,718
MSW: Open drag-on	N	11,875
MSW: Compactor drag-on	O	1,069
C&D: 2-axle trucks	W	4,400
C&D: 3-axle trucks	X	6,835
C&D: Semi trucks	Y	47,890
C&D: Open drag-on	Z	6,885
C&D: All other vehicles	AA	379
Total		102,052

Tons of Military Waste Disposed by Out-of-City Facilities, by Vehicle Type

Sector	Strata Included*	1999 Tons
C&D: Semi trucks	AD	8,533
C&D: All other vehicles	AB, AC, AE	7,195
Total		15,728

Tons of Waste Disposed by the City Streets Department, by Vehicle Type

Sector	Strata Included*	1999 Tons
3-axle trucks	AP	36,844
Semi trucks	AQ	158
Drag-on	AR	127
All other vehicles	AS	8,127
Total		45,256

Tons of Waste Disposed by City Schools, by Vehicle Type

Sector	Strata Included*	1999 Tons
3-axle trucks	AT	1,575
All other vehicles	AU	1,142
Total		2,717

Tons of Waste Disposed by City Water and Metro Wastewater Department, by Vehicle Type

Sector	Strata Included*	1999 Tons
3-axle trucks	AV	8,956
Semi trucks	AW	11,020
Drag-on	AX	5,195
Sewage solids	BK	120,565
All other vehicles	AY	3,356
Total		149,092

Tons of Waste Disposed by Other City Departments, by Vehicle Type

Sector	Strata Included*	1999 Tons
3-axle trucks	AZ	636
Semi trucks	BA	10
Drag-on	BB	7,598
All other vehicles	BC	3,726
Total		11,971

APPENDIX B: MATERIAL DEFINITIONS

PAPER

- (1) **Uncoated Corrugated Cardboard** usually has three layers. The center wavy layer is sandwiched between the two outer layers. It does not have any wax coating on the inside or outside.

Examples: This category includes entire cardboard containers, such as shipping and moving boxes, computer packaging cartons, and sheets and pieces of boxes and cartons. This category does not include chipboard.

- (2) **Waxed Corrugated Cardboard** usually has three layers. The center wavy layer is sandwiched between the two outer layers.

Examples: This category includes some water-resistant cardboard containers, such as shipping and moving boxes, as well as boxes designed to contain produce or other perishable goods.

- (3) **Paper Bags** means bags and sheets made from kraft paper.

Examples: This category includes paper grocery bags, fast food bags, department store bags, and heavyweight sheets of kraft packing paper.

- (4) **Newspaper** means paper used in newspapers.

Examples: This category includes newspaper and glossy inserts, and all items made from newsprint, such as free advertising guides, election guides, and tax instruction booklets.

- (5) **White Ledger Paper** means uncolored bond, rag, or stationary grade paper. It may have colored ink on it. When the paper is torn, the fibers are white.

Examples: This category includes white photocopy, white laser print, and letter paper.

- (6) **Colored Ledger Paper** means colored bond, rag, or stationery grade paper. When the paper is torn, the fibers are colored throughout.

Examples: This category includes colored photocopy and letter paper. This category does not include fluorescent dyed paper or deep-tone dyed paper such as goldenrod colored paper.

- (7) **Computer Paper** means paper used for computer printouts. This category usually has a strip of formfeed holes along two edges. If there are no holes, then the edges show tear marks. This category can be white or striped.

Examples: This category includes computer paper and printouts from continuous feed printers. This category does not include "white ledger" used in laser or impact printers, nor computer paper containing groundwood.

- (8) **Other Office Paper** means other kinds of paper used in offices.

Examples: This category includes manila folders, manila envelopes, index cards, white envelopes, white window envelopes, notebook paper, and carbonless forms. This category does not include "white ledger", "colored ledger" or "computer paper".

- (9) **Magazines and Catalogs** mean items made of glossy coated paper. This paper is usually slick, smooth to the touch, and reflects light.

Examples: This category includes glossy magazines, catalogs, brochures and pamphlets.

- (10) **Phone Books and Directories** mean thin paper between coated covers. These items are bound along the spine with glue.

Examples: This category includes whole or damaged telephone books, "yellow pages", real estate listings, and some non-glossy mail order catalogs.

- (11) **Other Miscellaneous Paper** means items made mostly of paper that do not fit into any of the above categories. Paper may be combined with minor amounts of other materials such as wax or glues. This category includes items made of chipboard, groundwood paper, and deep-toned or fluorescent dyed paper.

Examples: This category includes cereal and cracker boxes, unused paper plates and cups, goldenrod colored paper, and hardcover and softcover books.

- (12) **Remainder/Composite Paper** means items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, food, and moisture.

Examples: This category includes waxed corrugated cardboard, aseptic packages, wax coated milk cartons, waxed paper, tissue, paper towels, blueprints, sepia, onion skin, fast food wrappers, carbon paper, self adhesive notes, and photographs.

GLASS

- (13) **CRV Clear Bottles** means clear glass bottles with a CRV label.
- (14) **Non-CRV Clear Bottles and Containers** means clear glass beverage and food containers without a CRV label.
- (15) **CRV Brown Bottles** means brown glass bottles with a CRV label.
- (16) **Non-CRV Brown Bottles and Containers** means brown glass beverage and food containers without a CRV label.
- (17) **CRV Other Colored Bottles** means green or other-colored glass bottles with a CRV label.
- (18) **Non-CRV Other Colored Bottles and Containers** means green or other-colored glass beverage and food containers without a CRV label.
- (19) **Flat Glass** means clear or tinted glass that is flat.

Examples: This category includes glass window panes, doors, and table tops, flat automotive window glass (side windows), safety glass, and architectural glass. This category does not include windshields, laminated glass, or any curved glass.

- (20) **Remainder/Composite Glass** means glass that cannot be put in any other category. It includes items made mostly of glass but combined with other materials.

Examples: This category includes Pyrex, Corningware, crystal and other glass tableware, mirrors, and auto windshields.

METAL

- (21) **Tin/Steel Cans** means rigid containers made mainly of steel. These items will stick to a magnet and may be tin-coated. This category is used to store food, beverages, paint, and a variety of other household and consumer products.

Examples: This category includes canned food and beverage containers, empty metal paint cans, empty spray paint and other aerosol containers, and bimetal containers with steel sides and aluminum ends.

- (22) **Major Appliances** means discarded major appliances of any color. These items are often enamel-coated.

Examples: This category includes washing machines, clothes dryers, hot water heaters, stoves, and refrigerators. This category does not include electronics, such as televisions and stereos.

- (23) **Other Ferrous Metal** means any iron or steel that is magnetic or any stainless steel item. This category does not include "tin/steel cans".
- Examples: This category includes structural steel beams, metal clothes hangers, metal pipes, stainless steel cookware, security bars, and scrap ferrous items.
- (24) **CRV Aluminum Cans** means any food or beverage container, made mainly of aluminum, with a CRV label.
- (25) **Non-CRV Aluminum Cans** means any food or beverage container, made mainly of aluminum, without a CRV label.
- (26) **Other Non-Ferrous Metal** means any metal item, other than aluminum cans, that is not stainless steel and that is not magnetic. These items may be made of aluminum, copper, brass, bronze, lead, zinc, or other metals.
- Examples: This category includes aluminum window frames, aluminum siding, copper wire, shell casings, brass pipe, and aluminum foil.
- (27) **Remainder/Composite Metal** means metal that cannot be put in any other category. This category includes items made mostly of metal but combined with other materials and items made of both ferrous metals and non-ferrous metal combined.
- Examples: This category includes brown goods (electronics and other small appliances), computers, televisions, radios, and electronic parts.

PLASTIC

- (28) **CRV HDPE Containers** means natural and colored HDPE containers with a CRV label. This plastic is usually either cloudy white, allowing light to pass through it (natural) or a solid color, preventing light from passing through it (colored). When marked for identification, it bears the number "2" in the triangular recycling symbol.
- (29) **Non-CRV HDPE Containers** means natural and colored HDPE containers without a CRV label.
- (30) **CRV PETE Containers** means clear or colored PETE containers with a CRV label. When marked for identification, it bears the number "1" in the center of the triangular recycling symbol and may also bear the letters "PETE" or "PET". The color is usually transparent green or clear. A PETE container usually has a small dot left from the manufacturing process, not a seam. It does not turn white when bent.
- (31) **Non-CRV PETE Containers** means clear or colored PETE containers without a CRV label.

- (32) **Miscellaneous Plastic Containers** means plastic containers made of types of plastic other than HDPE or PETE. Items may be made of PVC, PP, or PS. When marked for identification, these items may bear the number "3", "4", "5", "6", or "7" in the triangular recycling symbol.

Examples: This category includes food containers such as bottles for salad dressings and vegetable oils, flexible and brittle yogurt cups and lids, syrup bottles, margarine tubs, microwave food trays, and clamshell-shaped fast food containers. This category also includes some shampoo containers and vitamin bottles.

- (33) **Film Plastic** means flexible plastic sheeting. It is made from a variety of plastic resins including HDPE and LDPE. It can be easily contoured around an object by hand pressure.

Examples: This category includes plastic garbage bags, food bags, dry cleaning bags, grocery store bags, packaging wrap, and food wrap. This category does not include rigid bubble packaging.

- (34) **Durable Plastic Items** means plastic objects other than containers and film plastic. This category also includes plastic objects other than containers or film that bear the numbers "1" through "7" in the triangular recycling symbol. These items are usually made to last for more than one use.

Examples: This category includes plastic outdoor furniture, plastic toys and sporting goods, and plastic housewares, such as mop buckets, dishes, cups, and cutlery. This category also includes building materials such as house siding, window sashes and frames, housings for electronics such as computers, televisions and stereos, and plastic pipes and fittings.

- (35) **Remainder/Composite Plastic** means plastic that cannot be put in any other category. This category includes items made mostly of plastic but combined with other materials.

Examples: This category includes auto parts made of plastic attached to metal, plastic bubble packaging, drinking straws, foam drinking cups, produce trays, egg cartons, foam packing blocks, packing peanuts, and cookie and muffin trays.

ORGANIC MATERIALS

- (36) **Food** means food material resulting from the processing, storage, preparation, cooking, handling or consumption of food. This category includes material from industrial, commercial or residential sources.

Examples: This category includes discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. This category includes grape pomace and other processed residues or material from canneries, wineries, or other industrial sources.

- (37) **Leaves and Grass** means plant material, except woody material, from any public or private landscapes.

Examples: This category includes leaves, grass clippings, and plants. This category does not include woody material or material from agricultural sources.

- (38) **Prunings and Trimmings** means woody plant material up to 4 inches in diameter from any public or private landscape.

Examples: This category includes prunings, shrubs, and small branches with branch diameters that do not exceed 4 inches. This category does not include stumps, tree trunks, or branches exceeding 4 inches in diameter. This category does not include material from agricultural sources.

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

- (40) **Agricultural Crop Residues** means plant material from agricultural sources.

Examples: This category includes orchard and vineyard prunings, vegetable byproducts from farming, residual fruits, vegetables, and other crop remains after usable crop is harvested. This category does not include processed residues from canneries, wineries, or other industrial sources

- (41) **Manures** means manure and soiled bedding materials from domestic, farm, or ranch animals.

Examples: This category includes manure and soiled bedding from animal production operations, race-tracks, riding stables, animal hospitals, and other sources.

- (42) **Textiles** means items made of thread, yarn, fabric, or cloth.

Examples: This category includes clothes, fabric trimmings, draperies, and all natural and synthetic cloth fibers. This category does not include cloth covered furniture, mattresses, leather shoes, leather bags, or leather belts.

- (43) **Diapers** means reusable (cloth) or disposable (plastic and cloth) diapers as well as any contaminants.
- (44) **Remainder/Composite Organic** means organic material that cannot be put in any other category. This category includes items made mostly of organic materials but combined with other materials.

Examples: This category includes leather items, carpets, cork, hemp rope, garden hoses, rubber items, hair, and carpet padding.

CONSTRUCTION AND DEMOLITION MATERIALS

- (45) **Concrete** means a hard material made from sand, gravel, aggregate, cement mix and water.

Examples: This category includes pieces of building foundations, concrete paving, and cinder blocks.

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

- (47) **Asphalt Roofing** means composite shingles and other roofing material made with asphalt.

Examples: This category includes asphalt shingles and attached roofing tar and tar paper.

- (48) **Non-treated Lumber** means untreated wood from building, manufacturing, landscaping, packaging, or demolition activities. This material does not include wood that has been coated with paint, varnish, adhesive, or other contaminants, and it does not include wood that has been treated with preservative or that has been assembled from chipped wood held together with glue.

Examples: This category includes dimensional lumber, lumber cutoffs, engineered wood such as plywood and particleboard, wood scraps, pallets, wood fencing, wood shake roofing, and wood siding.

- (49) **Treated Lumber** means wood from building, manufacturing, landscaping, packaging, or demolition activities. This material includes wood that has been coated with paint, varnish, or other contaminants, or that has been treated with preservative. It also includes chipped wood held together with glue (e.g., plywood or particle board).

- (50) **Gypsum Board** means interior wall covering made of a sheet of gypsum sandwiched between paper layers.
- Examples: This category includes used or unused, broken or whole sheets of sheetrock, drywall, gypsum board, plasterboard, gypboard, gyproc, and wallboard.
- (51) **Rock, Soil and Fines** means rock pieces of any size and soil, dirt, and other matter.
- Examples: This category includes rock, stones, and sand, clay, soil and other fines. This category also includes non-hazardous contaminated soil.
- (52) **Contaminated Soil, Street Sweepings, and Drain Cleanings** means soil contaminated with oil or other toxic materials, as well as material gathered from sweeping streets or cleaning storm drains (activities mainly conducted by City departments).
- (53) **Carpet and Carpet Padding** means organic (e.g., wool) or synthetic carpet, carpet padding, and other soft floor coverings (e.g., synthetic turf).
- (54) **Remainder/Composite Construction and Demolition** means construction and demolition material that cannot be put in any other category. This category may include items from different categories combined, which would be very hard to separate.
- Examples: This category includes brick, ceramics, tiles, toilets, sinks, and fiberglass insulation. This category may also include demolition debris that is a mixture of items such as plate glass, wood, tiles, gypsum board, and aluminum scrap.

HOUSEHOLD HAZARDOUS MATERIALS

- (55) **Paint** means containers with paint in them.
- Examples: This category includes latex paint, oil based paint, and tubes of pigment or fine art paint. This category does not include dried paint, empty paint cans, or empty aerosol containers.
- (56) **Vehicle and Equipment Fluids** means containers with fluids used in vehicles or engines, except used oil.
- Examples: This category includes used antifreeze and brake fluid. This category does not include empty vehicle and equipment fluid containers.

- (57) **Used Oil** means the same as defined in Health and Safety Code section 25250.1(a).

Examples: This category includes spent lubricating oil such as crankcase and transmission oil, gear oil, and hydraulic oil. It also includes used oil filters, the weight of which is considered to be the weight of the filters themselves plus the oil they contain.

- (58) **Batteries** means any type of battery including both drycell and lead acid.

Examples: This category includes car, flashlight, small appliance, watch and hearing aid batteries.

- (59) **Remainder/Composite Household Hazardous** means household hazardous material that cannot be put in the "Paint", "Automotive Fluids", "Used Oil", or "Batteries" categories. This category also includes household hazardous material that is mixed.

Examples: This category includes household hazardous waste which if improperly put in the solid waste stream may present handling problems or other hazards.

SPECIAL WASTES

- (60) **Ash** means a residue from the combustion of any solid or liquid material.

Examples: This category includes ash from fireplaces, incinerators, biomass facilities, waste-to-energy facilities, and barbecues. This category also includes ash and burned debris from structure fires.

- (61) **Sewage Solids** means residual solids and semi-solids from the treatment of domestic waste water or sewage.

Examples: This category includes biosolids, sludge, grit, screenings, and septage. This category does not include sewage or waste water discharged from the sewage treatment process.

- (62) **Industrial Sludge** means sludge from factories, manufacturing facilities, and refineries.

Examples: This category includes paper pulp sludge, and water treatment filter cake sludge.

- (63) **Treated Medical Waste** has the same meaning as treated medical waste in Section 25023.5 of the Health and Safety Code.

- (64) **Bulky Items** means large hard to handle items that are not defined separately, including furniture, mattresses, and other large items.

Examples: This category includes all sizes and types of furniture, mattresses, box springs, and base components.

- (65) **Tires** means vehicle tires.

Examples: This category includes tires from trucks, automobiles, motorcycles, heavy equipments, and bicycles.

- (66) **Remainder/Composite Special Waste** means special waste that cannot be put in any other category.

Examples: This category includes asbestos-containing materials, such as certain types of pipe insulation and floor tiles, auto fluff, auto-bodies, trucks, trailers, truck cabs, and artificial fireplace logs.

MIXED RESIDUE

- (67) **Mixed Residue** means material that cannot be put in any other category. This category includes mixed residue that cannot be sorted further.

Examples: This category includes residual material from a materials recovery facility or other sorting process that cannot be put in any of the previous remainder/composite categories.

APPENDIX C: ADDITIONAL WASTE COMPOSITION ANALYSES

COMPOSITION OF SINGLE-FAMILY RESIDENTIAL WASTE AS A FUNCTION OF THE AVAILABILITY OF RECYCLING SERVICE

For each region of the city, samples were analyzed for single-family residential curbside routes for which recycling service was or was not available. Separate composition profiles (Table 30 through Table 35 on the following pages) were developed for the areas with and without recycling service in each region. In addition, t-tests were used to measure composition differences between the areas with and without recycling service within each region.

TABLE 30: COMPOSITION OF DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE, NORTH REGION, AREAS WITH RECYCLING SERVICES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	31.1%		26,950	ORGANIC	40.5%		35,111
Uncoated Corrugated Cardboard	3.9%	1.0%	3,418	Food	19.2%	3.1%	16,644
Waxed Corrugated Cardboard	0.0%	0.1%	40	Leaves and Grass	6.7%	3.3%	5,825
Paper Bags	0.9%	0.3%	817	Prunings and Trimmings	5.2%	2.1%	4,502
Newspaper	5.8%	1.0%	5,012	Branches and Stumps	0.1%	0.2%	106
White Ledger Paper	1.3%	0.4%	1,146	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.1%	210	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	19	Textiles	2.0%	0.7%	1,769
Other Office Paper	1.2%	0.5%	1,048	Diapers	4.5%	1.2%	3,937
Magazines and Catalogs	2.6%	0.7%	2,293	Remainder/Composite Organic	2.7%	0.8%	2,328
Phone Books and Directories	0.2%	0.2%	179	CONSTRUCTION & DEMOLITION	5.0%		4,363
Other Miscellaneous Paper	6.3%	1.3%	5,479	Concrete	0.0%	0.0%	1
Remainder/Composite Paper	8.4%	1.3%	7,290	Asphalt Paving	0.0%	0.0%	0
GLASS	3.4%		2,922	Asphalt Roofing	0.1%	0.1%	88
CRV Clear Bottles	0.7%	0.2%	590	Non-Treated Lumber	1.0%	0.7%	865
Non-CRV Clear Bottles and Containers	1.0%	0.3%	873	Treated Lumber	0.5%	0.3%	409
CRV Brown Bottles	0.2%	0.1%	211	Gypsum Board	0.2%	0.2%	210
Non-CRV Brown Bottles and Containers	0.1%	0.1%	104	Rock, Soil and Fines	0.8%	1.0%	704
CRV Other Colored Bottles	0.6%	0.3%	559	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.4%	0.3%	329	Carpet & Carpet Padding	1.0%	0.9%	896
Flat Glass	0.0%	0.0%	2	Remainder/Composite Construction and Demolition	1.4%	1.4%	1,190
Remainder/Composite Glass	0.3%	0.2%	254	HOUSEHOLD HAZARDOUS	0.2%		181
METAL	4.6%		3,948	Paint	0.1%	0.1%	64
Tin/Steel Cans	1.1%	0.2%	957	Vehicle and Equipment Fluids	0.0%	0.0%	12
Major Appliances	0.0%	0.0%	35	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	1.0%	0.5%	873	Batteries	0.0%	0.0%	25
CRV Aluminum Cans	0.3%	0.1%	225	Remainder/Composite Household Hazardous	0.1%	0.1%	80
Non-CRV Aluminum Cans	0.0%	0.0%	33	SPECIAL WASTES	2.1%		1,788
Other Non-Ferrous Metal	0.5%	0.3%	433	Ash	0.2%	0.2%	163
Remainder/Composite Metal	1.6%	0.6%	1,393	Sewage Solids	0.0%	0.0%	0
PLASTIC	9.9%		8,600	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.3%	0.1%	249	Treated Medical Waste	0.0%	0.0%	4
Non-CRV HDPE Containers	0.2%	0.1%	192	Bulky Items	0.1%	0.1%	77
CRV PETE Containers	0.1%	0.1%	129	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.6%	0.2%	531	Remainder/Composite Special Waste	1.8%	1.6%	1,544
Miscellaneous Plastic Containers	0.9%	0.2%	760	MIXED RESIDUE	3.3%		2,861
Film Plastic	4.7%	0.9%	4,085	Mixed Residue	3.3%	1.2%	2,861
Durable Plastic Items	1.2%	0.2%	1,069				
Remainder/Composite Plastic	1.8%	0.5%	1,586				
				Total Percent	100.0%		
Sample Count	21			Total 1999 Tons			86,725

TABLE 31: COMPOSITION OF DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE, NORTH REGION, AREAS WITHOUT RECYCLING SERVICES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	30.4%		24,775	ORGANIC	43.5%		35,477
Uncoated Corrugated Cardboard	4.1%	1.3%	3,325	Food	13.8%	3.0%	11,238
Waxed Corrugated Cardboard	0.0%	0.1%	41	Leaves and Grass	17.7%	6.5%	14,435
Paper Bags	0.5%	0.2%	441	Prunings and Trimmings	3.8%	2.6%	3,073
Newspaper	8.6%	2.0%	7,047	Branches and Stumps	0.7%	1.0%	552
White Ledger Paper	1.2%	0.6%	988	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.1%	0.1%	117	Manures	0.1%	0.2%	85
Computer Paper	0.0%	0.0%	22	Textiles	2.6%	1.4%	2,131
Other Office Paper	1.1%	0.7%	897	Diapers	3.0%	0.9%	2,410
Magazines and Catalogs	1.8%	0.6%	1,471	Remainder/Composite Organic	1.9%	0.8%	1,553
Phone Books and Directories	0.8%	0.7%	612	CONSTRUCTION & DEMOLITION	6.4%		5,257
Other Miscellaneous Paper	5.3%	1.1%	4,285	Concrete	0.3%	0.3%	209
Remainder/Composite Paper	6.8%	1.4%	5,531	Asphalt Paving	0.0%	0.0%	0
GLASS	2.5%		2,012	Asphalt Roofing	0.0%	0.0%	16
CRV Clear Bottles	0.5%	0.2%	416	Non-Treated Lumber	2.4%	3.0%	1,975
Non-CRV Clear Bottles and Containers	0.6%	0.3%	490	Treated Lumber	0.9%	0.6%	730
CRV Brown Bottles	0.4%	0.3%	327	Gypsum Board	0.7%	0.9%	576
Non-CRV Brown Bottles and Containers	0.1%	0.0%	69	Rock, Soil and Fines	1.1%	1.5%	902
CRV Other Colored Bottles	0.4%	0.2%	318	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.2%	0.3%	164	Carpet & Carpet Padding	0.4%	0.4%	297
Flat Glass	0.0%	0.0%	9	Remainder/Composite Construction and Demolition	0.7%	0.5%	552
Remainder/Composite Glass	0.3%	0.2%	219	HOUSEHOLD HAZARDOUS	0.2%		173
METAL	7.8%		6,378	Paint	0.0%	0.1%	37
Tin/Steel Cans	1.2%	0.3%	1,003	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.1%	0.2%	101	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	4.7%	5.4%	3,834	Batteries	0.0%	0.0%	32
CRV Aluminum Cans	0.2%	0.1%	182	Remainder/Composite Household Hazardous	0.1%	0.1%	103
Non-CRV Aluminum Cans	0.0%	0.0%	14	SPECIAL WASTES	0.3%		262
Other Non-Ferrous Metal	0.4%	0.2%	355	Ash	0.0%	0.0%	0
Remainder/Composite Metal	1.1%	0.8%	889	Sewage Solids	0.0%	0.0%	0
PLASTIC	6.7%		5,494	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.2%	0.1%	161	Treated Medical Waste	0.0%	0.1%	34
Non-CRV HDPE Containers	0.2%	0.1%	166	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.2%	0.1%	132	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.6%	0.2%	467	Remainder/Composite Special Waste	0.3%	0.3%	228
Miscellaneous Plastic Containers	0.6%	0.1%	462	MIXED RESIDUE	2.1%		1,729
Film Plastic	2.6%	0.5%	2,124	Mixed Residue	2.1%	1.1%	1,729
Durable Plastic Items	1.5%	0.6%	1,202				
Remainder/Composite Plastic	1.0%	0.2%	780	Total Percent	100.0%		
Sample Count	21		Total 1999 Tons				81,558

TABLE 32: COMPOSITION OF DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE, CENTRAL REGION, AREAS WITH RECYCLING SERVICES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	29.9%		16,729	ORGANIC	39.5%		22,092
Uncoated Corrugated Cardboard	2.2%	0.6%	1,217	Food	14.0%	2.5%	7,812
Waxed Corrugated Cardboard	0.0%	0.0%	13	Leaves and Grass	10.6%	3.1%	5,930
Paper Bags	0.7%	0.2%	408	Prunings and Trimmings	4.2%	2.3%	2,334
Newspaper	6.7%	1.9%	3,724	Branches and Stumps	1.1%	1.6%	624
White Ledger Paper	2.0%	1.6%	1,122	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.3%	0.2%	154	Manures	0.1%	0.1%	38
Computer Paper	0.0%	0.0%	8	Textiles	1.8%	0.5%	1,001
Other Office Paper	0.8%	0.3%	439	Diapers	3.1%	1.1%	1,726
Magazines and Catalogs	2.4%	0.7%	1,363	Remainder/Composite Organic	4.7%	2.2%	2,626
Phone Books and Directories	0.5%	0.5%	294	CONSTRUCTION & DEMOLITION	11.2%		6,250
Other Miscellaneous Paper	5.7%	1.7%	3,207	Concrete	2.3%	3.0%	1,280
Remainder/Composite Paper	8.5%	1.3%	4,780	Asphalt Paving	0.0%	0.0%	0
GLASS	2.0%		1,099	Asphalt Roofing	0.2%	0.2%	109
CRV Clear Bottles	0.3%	0.2%	170	Non-Treated Lumber	0.9%	0.6%	501
Non-CRV Clear Bottles and Containers	0.5%	0.2%	273	Treated Lumber	0.8%	0.4%	448
CRV Brown Bottles	0.3%	0.2%	182	Gypsum Board	0.2%	0.2%	102
Non-CRV Brown Bottles and Containers	0.0%	0.1%	22	Rock, Soil and Fines	3.5%	3.5%	1,970
CRV Other Colored Bottles	0.5%	0.2%	292	Contaminated soil, street sweepings, drain cleanings	0.3%	0.5%	175
Non-CRV & Other Colored Bottles and Containers	0.1%	0.1%	42	Carpet & Carpet Padding	0.7%	1.1%	404
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	2.3%	1.5%	1,263
Remainder/Composite Glass	0.2%	0.1%	118	HOUSEHOLD HAZARDOUS	0.3%		173
METAL	4.6%		2,554	Paint	0.0%	0.0%	11
Tin/Steel Cans	1.2%	0.2%	668	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	11
Other Ferrous Metal	0.5%	0.2%	255	Batteries	0.1%	0.0%	38
CRV Aluminum Cans	0.2%	0.1%	132	Remainder/Composite Household Hazardous	0.2%	0.2%	114
Non-CRV Aluminum Cans	0.0%	0.0%	21	SPECIAL WASTES	2.0%		1,139
Other Non-Ferrous Metal	0.5%	0.3%	256	Ash	0.2%	0.3%	110
Remainder/Composite Metal	2.2%	1.1%	1,222	Sewage Solids	0.0%	0.0%	0
PLASTIC	8.8%		4,932	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.4%	0.1%	219	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.2%	0.1%	126	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.1%	0.1%	78	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.6%	0.1%	311	Remainder/Composite Special Waste	1.8%	1.4%	1,028
Miscellaneous Plastic Containers	1.0%	0.4%	581	MIXED RESIDUE	1.8%		985
Film Plastic	4.5%	0.7%	2,532	Mixed Residue	1.8%	0.8%	985
Durable Plastic Items	0.8%	0.3%	446				
Remainder/Composite Plastic	1.1%	0.3%	640	Total Percent	100.0%		
Sample Count	21		Total 1999 Tons				55,954

TABLE 33: COMPOSITION OF DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE, CENTRAL REGION, AREAS WITHOUT RECYCLING SERVICES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	31.3%		8,897	ORGANIC	39.2%		11,172
Uncoated Corrugated Cardboard	4.7%	1.4%	1,342	Food	10.8%	2.6%	3,063
Waxed Corrugated Cardboard	0.0%	0.0%	1	Leaves and Grass	14.6%	5.4%	4,170
Paper Bags	0.8%	0.2%	237	Prunings and Trimmings	3.4%	2.4%	970
Newspaper	9.2%	1.8%	2,615	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	1.3%	0.5%	360	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.1%	45	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	3	Textiles	5.6%	4.3%	1,604
Other Office Paper	0.5%	0.2%	148	Diapers	2.1%	0.7%	585
Magazines and Catalogs	2.7%	1.1%	782	Remainder/Composite Organic	2.7%	1.4%	780
Phone Books and Directories	0.6%	0.5%	185	CONSTRUCTION & DEMOLITION	5.9%		1,681
Other Miscellaneous Paper	5.3%	1.0%	1,498	Concrete	0.2%	0.2%	56
Remainder/Composite Paper	5.9%	0.6%	1,681	Asphalt Paving	0.0%	0.0%	0
GLASS	3.1%		876	Asphalt Roofing	0.1%	0.1%	19
CRV Clear Bottles	0.7%	0.2%	197	Non-Treated Lumber	1.0%	0.7%	285
Non-CRV Clear Bottles and Containers	0.5%	0.2%	154	Treated Lumber	0.8%	0.4%	234
CRV Brown Bottles	0.6%	0.4%	167	Gypsum Board	0.6%	0.8%	179
Non-CRV Brown Bottles and Containers	0.1%	0.1%	19	Rock, Soil and Fines	1.5%	1.4%	433
CRV Other Colored Bottles	0.7%	0.5%	189	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.3%	0.1%	75	Carpet & Carpet Padding	1.4%	1.2%	393
Flat Glass	0.0%	0.0%	3	Remainder/Composite Construction and Demolition	0.3%	0.3%	82
Remainder/Composite Glass	0.3%	0.2%	72	HOUSEHOLD HAZARDOUS	0.1%		36
METAL	6.7%		1,897	Paint	0.0%	0.0%	9
Tin/Steel Cans	1.3%	0.3%	359	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.1%	0.1%	24	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.4%	0.2%	110	Batteries	0.1%	0.0%	20
CRV Aluminum Cans	0.2%	0.1%	70	Remainder/Composite Household Hazardous	0.0%	0.0%	7
Non-CRV Aluminum Cans	0.0%	0.0%	1	SPECIAL WASTES	1.4%		395
Other Non-Ferrous Metal	0.6%	0.5%	158	Ash	0.0%	0.0%	0
Remainder/Composite Metal	4.1%	2.4%	1,175	Sewage Solids	0.0%	0.0%	0
PLASTIC	9.9%		2,821	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.4%	0.1%	126	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.2%	0.1%	59	Bulky Items	0.2%	0.3%	59
CRV PETE Containers	0.2%	0.1%	68	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.7%	0.2%	203	Remainder/Composite Special Waste	1.2%	1.1%	336
Miscellaneous Plastic Containers	0.7%	0.2%	192	MIXED RESIDUE	2.4%		696
Film Plastic	4.5%	0.7%	1,272	Mixed Residue	2.4%	1.0%	696
Durable Plastic Items	1.5%	0.5%	432				
Remainder/Composite Plastic	1.6%	0.4%	468	Total Percent	100.0%		
Sample Count	21		Total 1999 Tons				28,469

TABLE 34: COMPOSITION OF DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE, SOUTH REGION, AREAS WITH RECYCLING SERVICES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	23.7%		6,962	ORGANIC	50.1%		14,742
Uncoated Corrugated Cardboard	3.3%	1.0%	980	Food	26.7%	4.1%	7,849
Waxed Corrugated Cardboard	0.0%	0.0%	3	Leaves and Grass	9.3%	3.6%	2,737
Paper Bags	1.3%	0.3%	375	Prunings and Trimmings	3.3%	1.5%	976
Newspaper	4.0%	0.8%	1,164	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	1.1%	0.3%	310	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.1%	45	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	3	Textiles	3.2%	1.1%	937
Other Office Paper	0.5%	0.2%	160	Diapers	4.6%	0.9%	1,368
Magazines and Catalogs	1.0%	0.4%	288	Remainder/Composite Organic	3.0%	1.0%	874
Phone Books and Directories	0.1%	0.1%	31	CONSTRUCTION & DEMOLITION	5.4%		1,594
Other Miscellaneous Paper	4.5%	0.6%	1,335	Concrete	0.0%	0.0%	0
Remainder/Composite Paper	7.7%	1.1%	2,267	Asphalt Paving	0.0%	0.0%	0
GLASS	1.8%		523	Asphalt Roofing	0.0%	0.0%	3
CRV Clear Bottles	0.5%	0.2%	134	Non-Treated Lumber	1.2%	0.6%	350
Non-CRV Clear Bottles and Containers	0.5%	0.2%	145	Treated Lumber	1.0%	0.9%	297
CRV Brown Bottles	0.3%	0.2%	79	Gypsum Board	0.3%	0.5%	91
Non-CRV Brown Bottles and Containers	0.0%	0.0%	14	Rock, Soil and Fines	0.2%	0.4%	70
CRV Other Colored Bottles	0.2%	0.1%	54	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.2%	0.1%	50	Carpet & Carpet Padding	0.8%	0.6%	232
Flat Glass	0.1%	0.1%	16	Remainder/Composite Construction and Demolition	1.9%	1.1%	552
Remainder/Composite Glass	0.1%	0.1%	30	HOUSEHOLD HAZARDOUS	0.3%		90
METAL	4.5%		1,330	Paint	0.0%	0.0%	2
Tin/Steel Cans	1.5%	0.3%	444	Vehicle and Equipment Fluids	0.0%	0.1%	9
Major Appliances	0.0%	0.0%	0	Used Oil	0.1%	0.1%	23
Other Ferrous Metal	1.3%	1.2%	375	Batteries	0.1%	0.0%	19
CRV Aluminum Cans	0.2%	0.1%	59	Remainder/Composite Household Hazardous	0.1%	0.2%	37
Non-CRV Aluminum Cans	0.0%	0.0%	11	SPECIAL WASTES	0.8%		230
Other Non-Ferrous Metal	0.4%	0.2%	120	Ash	0.3%	0.3%	89
Remainder/Composite Metal	1.1%	0.5%	321	Sewage Solids	0.0%	0.0%	0
PLASTIC	10.5%		3,086	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.5%	0.1%	156	Treated Medical Waste	0.0%	0.0%	13
Non-CRV HDPE Containers	0.2%	0.0%	52	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.1%	0.0%	38	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.7%	0.1%	204	Remainder/Composite Special Waste	0.4%	0.5%	128
Miscellaneous Plastic Containers	0.6%	0.1%	173	MIXED RESIDUE	3.0%		873
Film Plastic	5.1%	0.4%	1,514	Mixed Residue	3.0%	0.9%	873
Durable Plastic Items	1.5%	0.4%	431				
Remainder/Composite Plastic	1.8%	0.2%	517	Total Percent	100.0%		
Sample Count	21		Total 1999 Tons				29,428

TABLE 35: COMPOSITION OF DISPOSED SINGLE-FAMILY RESIDENTIAL WASTE, SOUTH REGION, AREAS WITHOUT RECYCLING SERVICES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	26.5%		7,707	ORGANIC	42.9%		12,475
Uncoated Corrugated Cardboard	4.6%	1.0%	1,351	Food	15.0%	3.3%	4,381
Waxed Corrugated Cardboard	0.0%	0.0%	9	Leaves and Grass	11.9%	4.2%	3,468
Paper Bags	0.6%	0.3%	179	Prunings and Trimmings	3.7%	1.4%	1,068
Newspaper	6.8%	1.7%	1,984	Branches and Stumps	2.4%	2.8%	705
White Ledger Paper	0.8%	0.2%	236	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.2%	58	Manures	0.3%	0.5%	86
Computer Paper	0.1%	0.1%	19	Textiles	4.0%	1.8%	1,162
Other Office Paper	0.4%	0.1%	103	Diapers	3.0%	1.0%	876
Magazines and Catalogs	0.8%	0.3%	235	Remainder/Composite Organic	2.5%	1.0%	729
Phone Books and Directories	0.5%	0.3%	131	CONSTRUCTION & DEMOLITION	10.7%		3,126
Other Miscellaneous Paper	5.0%	0.6%	1,463	Concrete	1.0%	1.3%	293
Remainder/Composite Paper	6.7%	0.9%	1,941	Asphalt Paving	0.0%	0.0%	0
GLASS	2.2%		627	Asphalt Roofing	0.3%	0.4%	76
CRV Clear Bottles	0.6%	0.3%	171	Non-Treated Lumber	1.3%	0.8%	364
Non-CRV Clear Bottles and Containers	0.5%	0.2%	140	Treated Lumber	1.3%	0.9%	390
CRV Brown Bottles	0.3%	0.1%	96	Gypsum Board	0.1%	0.1%	19
Non-CRV Brown Bottles and Containers	0.0%	0.0%	6	Rock, Soil and Fines	3.1%	2.4%	905
CRV Other Colored Bottles	0.0%	0.0%	8	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.3%	0.2%	78	Carpet & Carpet Padding	1.6%	1.4%	474
Flat Glass	0.0%	0.0%	5	Remainder/Composite Construction and Demolition	2.1%	2.4%	605
Remainder/Composite Glass	0.4%	0.3%	124	HOUSEHOLD HAZARDOUS	0.2%		68
METAL	4.9%		1,418	Paint	0.0%	0.0%	2
Tin/Steel Cans	1.7%	0.3%	491	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.1%	0.2%	29	Used Oil	0.1%	0.2%	41
Other Ferrous Metal	1.0%	0.5%	296	Batteries	0.1%	0.1%	25
CRV Aluminum Cans	0.2%	0.1%	53	Remainder/Composite Household Hazardous	0.0%	0.0%	1
Non-CRV Aluminum Cans	0.1%	0.0%	15	SPECIAL WASTES	0.2%		63
Other Non-Ferrous Metal	0.5%	0.3%	151	Ash	0.1%	0.2%	39
Remainder/Composite Metal	1.3%	0.7%	383	Sewage Solids	0.0%	0.0%	0
PLASTIC	10.0%		2,925	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.6%	0.1%	179	Treated Medical Waste	0.0%	0.0%	4
Non-CRV HDPE Containers	0.2%	0.1%	66	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.3%	0.1%	99	Tires	0.0%	0.1%	10
Non-CRV PETE Containers	0.8%	0.1%	241	Remainder/Composite Special Waste	0.0%	0.0%	10
Miscellaneous Plastic Containers	0.9%	0.4%	253	MIXED RESIDUE	2.4%		701
Film Plastic	4.5%	0.6%	1,306	Mixed Residue	2.4%	1.1%	701
Durable Plastic Items	1.2%	0.4%	348				
Remainder/Composite Plastic	1.5%	0.4%	434				
				Total Percent	100.0%		
Sample Count	21			Total 1999 Tons			29,111

T-tests were used to measure differences between the composition of refuse for single-family homes with and without curbside recycling services. Calculations were performed only for the categories of waste that would be collected through the recycling programs.

The mean waste composition ratio and the t-statistic are calculated from the sampling 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 the purposes of this test, only those calculation results with a p-value of less than 0.0125 are considered to be statistically significant. This threshold is conservative in order to restrict the chances of a “false positive” result.

In Table 36 through Table 38, an asterisk (*) is used to denote cases where the t-test shows that there is a statistically significant difference in the amount of a material class present in the waste. For the cases where the t-test fails to show a significant difference (cases without asterisks), there are two possibilities:

- (1) there is no true difference between the areas with and without recycling service, or
- (2) even though there may be a difference, there is not enough evidence to prove it.

As indicated in the tables below, the only statistically significant difference was for food in the south region. The single-family residences without recycling service discarded significantly less food than those residences with recycling service in the same region.

TABLE 36: DIFFERENCES IN THE RELATIVE AMOUNTS OF RECYCLABLE MATERIALS IN SINGLE-FAMILY RESIDENTIAL WASTE, NORTH REGION

	Mean Ratio		t-Statistic	p-Value <i>(Statistically valid difference if value is less than or equal to 0.0125)</i>
	<i>(Material Wt/Total Wt)</i>			
	<i>Rec. Svc.</i>	<i>No Rec. Svc.</i>		
Recyclable Paper	22.6%	23.5%	0.3120	0.7567
Recyclable Glass	3.1%	2.2%	1.7225	0.0927
Metal Cans	1.4%	1.5%	0.2985	0.7669
Recyclable Plastic	1.3%	1.1%	0.5675	0.5736
Food	19.2%	13.8%	2.0779	0.0442
Recyclable Yard Waste	11.9%	21.5%	1.9741	0.0553
Household Hazardous Waste	0.2%	0.2%	0.0239	0.9811
Other Materials	40.3%	36.2%	0.8390	0.4065
<i>Number of Samples</i>	21	21		

TABLE 37: DIFFERENCES IN THE RELATIVE AMOUNTS OF RECYCLABLE MATERIALS IN SINGLE-FAMILY RESIDENTIAL WASTE, CENTRAL REGION

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value (Statistically valid difference if value is less than or equal to 0.0125)
	Rec. Svc.	No Rec. Svc.		
Recyclable Paper	21.3%	25.3%	1.1225	0.2683
Recyclable Glass	1.8%	2.8%	1.6785	0.1010
Metal Cans	1.5%	1.5%	0.1882	0.8517
Recyclable Plastic	1.3%	1.6%	1.0991	0.2783
Food	14.0%	10.8%	1.4741	0.1483
Recyclable Yard Waste	14.8%	18.1%	0.7860	0.4365
Household Hazardous Waste	0.3%	0.1%	1.2555	0.2166
Other Materials	45.1%	39.8%	1.1254	0.2671
<i>Number of Samples</i>	21	21		

TABLE 38: DIFFERENCES IN THE RELATIVE AMOUNTS OF RECYCLABLE MATERIALS IN SINGLE-FAMILY RESIDENTIAL WASTE, SOUTH REGION

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value (Statistically valid difference if value is less than or equal to 0.0125)
	Rec. Svc.	No Rec. Svc.		
Recyclable Paper	15.9%	19.8%	1.7355	0.0904
Recyclable Glass	1.6%	1.7%	0.2261	0.8223
Metal Cans	1.7%	1.9%	0.6862	0.4965
Recyclable Plastic	1.5%	2.0%	2.2141	0.0326
Food	26.7%	15.0%	3.6294	0.0008 *
Recyclable Yard Waste	12.6%	15.6%	0.7357	0.4662
Household Hazardous Waste	0.3%	0.2%	0.4147	0.6805
Other Materials	39.6%	43.7%	1.0589	0.2960
<i>Number of Samples</i>	21	21		

For the t-tests related to recyclable materials, the following definitions were used.

Recyclable Paper included Uncoated Corrugated Cardboard, Newspaper Paper Bags, Newspaper, White Ledger Paper, Colored Ledger Paper, Computer Paper, Other Office Paper, Magazines and Catalogs, Phone Books and Directories, and Other Miscellaneous Paper.

Recyclable Glass included CRV Clear Bottles, Non-CRV Clear Bottles and Containers, CRV Brown Bottles, Non-CRV Brown Bottles and Containers, CRV Other Colored Bottles, and Non-CRV & Other Colored Bottles and Containers.

Metal Cans included Tin/Steel Cans, CRV Aluminum Cans, and Non-CRV Aluminum Cans.

Recyclable Plastic included CRV HDPE Containers, Non-CRV HDPE Containers, CRV PETE Containers, and Non-CRV PETE Containers.

Food included only the material category Food.

Recyclable Yard Waste included Leaves and Grass, as well as Prunings and Trimmings.

Household Hazardous Waste included Paint, Vehicle and Equipment Fluids, Used Oil, Batteries, and Remainder/Composite Household Hazardous Waste.

Other Materials included all other components of the waste stream. These components are not accepted by the curbside recycling program.

PREVALENCE OF YARD WASTE IN SINGLE-FAMILY WASTE FOR SELECTED AREAS WITHOUT YARD WASTE COLLECTION SERVICE

T-tests were used to compare the relative percent of yard waste present in single-family residential waste for selected communities that do not have curbside yard waste collection service. The data for each of six areas was compared to a *reference community*, which was chosen to be the set of single-family residential samples from areas in the north region that do not have yard waste collection service. The reference community included portions of Mira Mesa, Clairemont, and Linda Vista. Yard waste was defined as *leaves and grass and prunings and trimmings*.

For the purposes of this test, only those calculation results with a p-value of less than 0.0500 are considered to be statistically significant. In Table 39 through Table 44, an asterisk (*) is used to denote cases where the t-test shows that there is a statistically significant difference in the amount of a material class present in the waste.

The candidate areas are described below and shown graphically in Figure 8.

<u>Candidate Area</u>	<u>Description of Area</u>
#1	Ocean Beach, San Ysidro, Chollas View/Mt. Hope (area south of Hwy. 94 and surrounding I-805 and Market St., and Bay Terraces (area north of Paradise Valley Road southeast of Plaza Blvd. including the area surrounding Woodman).
#2	City Heights (area South of El Cajon Blvd., East of 40th St., and West of 54th St.)
#3	Downtown, Sherman Heights, Grant Hill, Stockton, Mountain View, Logan Heights, Barrio Logan, Memorial, Southcrest, and Shelltown.
#4	Rancho Bernardo (Bernardo Heights Country Club area), and Morena (area adjacent to the University of San Diego (southeast of Linda Vista Road).
#5	City Heights/North Park.
#6	City Heights (area east of I-15; west of Home Ave./ Euclid; and south of Landis St.).

As shown in the tables below, there are statistically significant differences between the reference community and candidate areas #2, #5, and #6. In each of these cases, the single-family residences in the candidate area discarded significantly less yard waste than the reference community.

When the results are compared to the reference community, it is apparent that Candidate Area #1 should be provided yard waste recycling services. Candidate Areas #2, #4, and #6 should not receive yard waste recycling services because the percentage of yard waste in those areas approached that of the reference community and the p-values were so high

(indicating wide variability in samples). To maximize diversion, Candidate Area #3 could be selectively targeted to provide yard waste recycling services.

TABLE 39: DIFFERENCES IN THE RELATIVE AMOUNTS OF DISPOSED YARD WASTE, CANDIDATE AREA #1

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value <i>Cut-off for statistically valid difference = 0.050)</i>
	Reference Community	Candidate Area #1		
Recyclable Yard Waste	21.5%	27.8%	1.1976	0.2370
Other Materials	78.5%	72.2%	1.1976	0.2370
<i>Number of Samples</i>	21	29		

TABLE 40: DIFFERENCES IN THE RELATIVE AMOUNTS OF DISPOSED YARD WASTE, CANDIDATE AREA #2

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value <i>Cut-off for statistically valid difference = 0.050)</i>
	Reference Community	Candidate Area #2		
Recyclable Yard Waste	21.5%	10.1%	2.9191	0.0053 *
Other Materials	78.5%	89.9%	2.9191	0.0053 *
<i>Number of Samples</i>	21	30		

TABLE 41: DIFFERENCES IN THE RELATIVE AMOUNTS OF DISPOSED YARD WASTE, CANDIDATE AREA #3

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value <i>Cut-off for statistically valid difference = 0.050)</i>
	Reference Community	Candidate Area #3		
Recyclable Yard Waste	21.5%	17.5%	0.9795	0.3320
Other Materials	78.5%	82.5%	0.9795	0.3320
<i>Number of Samples</i>	21	32		

TABLE 42: DIFFERENCES IN THE RELATIVE AMOUNTS OF DISPOSED YARD WASTE, CANDIDATE AREA #4

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value <i>Cut-off for statistically valid difference = 0.050)</i>
	Reference Community	Candidate Area #4		
Recyclable Yard Waste	21.5%	11.9%	1.9734	0.0549
Other Materials	78.5%	88.1%	1.9734	0.0549
<i>Number of Samples</i>	21	24		

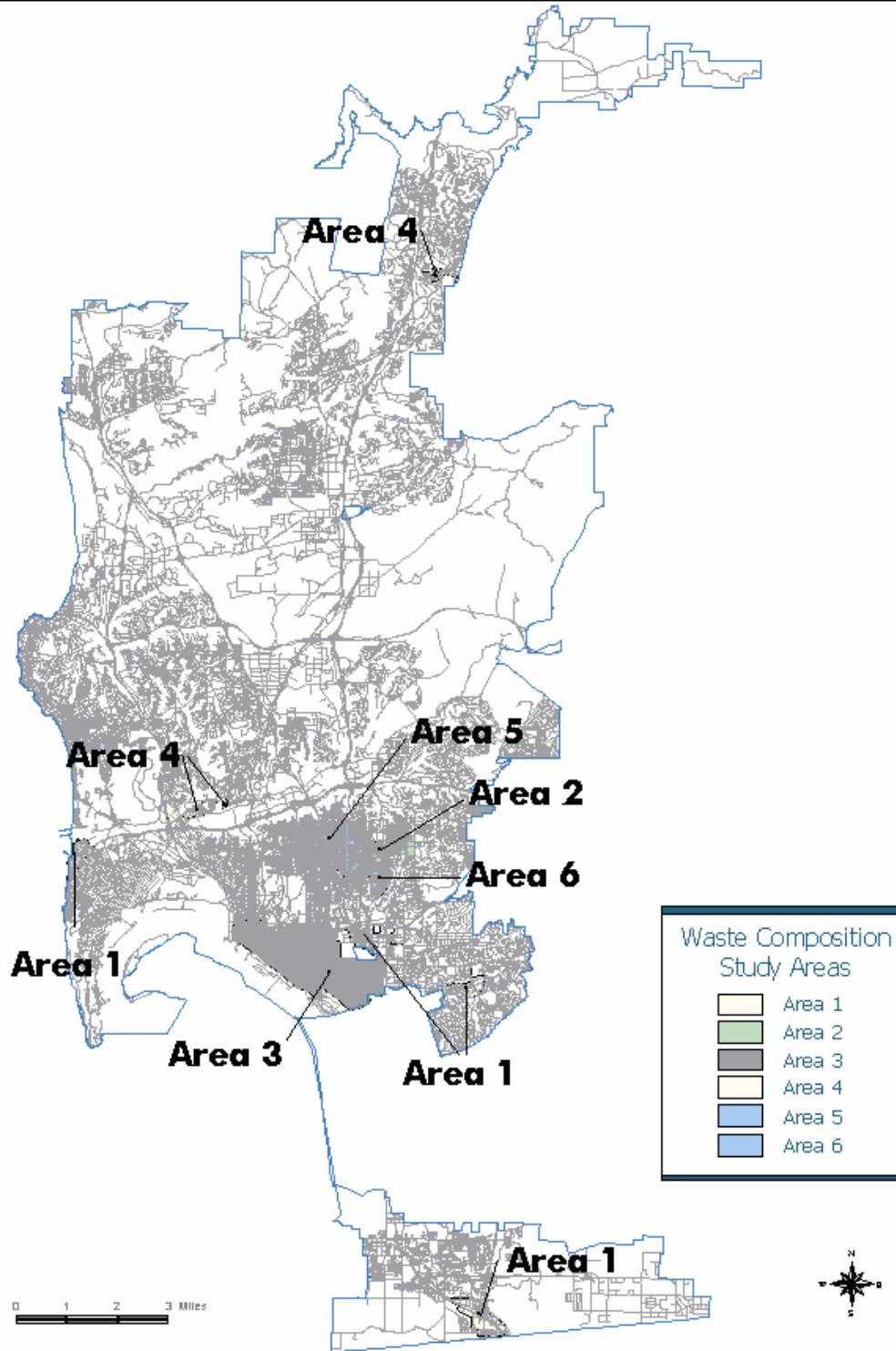
**TABLE 43: DIFFERENCES IN THE RELATIVE AMOUNTS OF DISPOSED
YARD WASTE, CANDIDATE AREA #5**

	Mean Ratio <i>(Material Wt/Total Wt)</i>		t-Statistic	p-Value <i>Cut-off for statistically valid difference = 0.050)</i>
	Reference Community	Candidate Area #5		
Recyclable Yard Waste	21.5%	11.8%	2.2918	0.0264 *
Other Materials	78.5%	88.2%	2.2918	0.0264 *
<i>Number of Samples</i>	21	28		

**TABLE 44: DIFFERENCES IN THE RELATIVE AMOUNTS OF DISPOSED
YARD WASTE, CANDIDATE AREA #6**

	Mean Ratio <i>(Material Wt/Total Wt)</i>		t-Statistic	p-Value <i>Cut-off for statistically valid difference = 0.050)</i>
	Reference Community	Candidate Area #6		
Recyclable Yard Waste	21.5%	12.6%	2.1421	0.0371 *
Other Materials	78.5%	87.4%	2.1421	0.0371 *
<i>Number of Samples</i>	21	31		

FIGURE 8: CANDIDATE AREAS FOR COMPARISONS OF YARD WASTE PREVALENCE



COMPOSITION OF MULTIFAMILY RESIDENTIAL WASTE BY REGION

TABLE 45: COMPOSITION OF DISPOSED MULTIFAMILY RESIDENTIAL WASTE, NORTH REGION

<i>Calculated at 90% confidence interval</i>	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	42.1%		40,070	ORGANIC	30.8%		29,349
Uncoated Corrugated Cardboard	7.8%	2.2%	7,444	Food	13.6%	4.1%	12,893
Waxed Corrugated Cardboard	0.9%	1.2%	825	Leaves and Grass	7.2%	5.2%	6,856
Paper Bags	0.8%	0.3%	759	Prunings and Trimmings	3.7%	4.2%	3,515
Newspaper	12.6%	3.6%	12,023	Branches and Stumps	1.4%	1.6%	1,317
White Ledger Paper	1.8%	0.7%	1,706	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.2%	0.1%	234	Manures	0.0%	0.0%	0
Computer Paper	0.1%	0.1%	55	Textiles	1.7%	0.7%	1,599
Other Office Paper	0.7%	0.2%	674	Diapers	2.1%	1.3%	1,954
Magazines and Catalogs	2.3%	0.5%	2,153	Remainder/Composite Organic	1.3%	0.5%	1,216
Phone Books and Directories	0.6%	0.6%	610	CONSTRUCTION & DEMOLITION	3.7%		3,486
Other Miscellaneous Paper	5.9%	1.4%	5,645	Concrete	0.0%	0.0%	0
Remainder/Composite Paper	8.3%	2.0%	7,943	Asphalt Paving	0.0%	0.0%	0
GLASS	4.2%		4,018	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	0.9%	0.3%	900	Non-Treated Lumber	0.8%	0.8%	750
Non-CRV Clear Bottles and Containers	0.8%	0.2%	731	Treated Lumber	0.8%	1.1%	748
CRV Brown Bottles	1.0%	0.6%	993	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	11	Rock, Soil and Fines	0.1%	0.2%	98
CRV Other Colored Bottles	0.8%	0.4%	797	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.2%	0.3%	196	Carpet & Carpet Padding	1.9%	1.8%	1,795
Flat Glass	0.2%	0.3%	146	Remainder/Composite Construction and Demolition	0.1%	0.1%	96
Remainder/Composite Glass	0.3%	0.2%	244	HOUSEHOLD HAZARDOUS	0.4%		421
METAL	6.3%		6,038	Paint	0.0%	0.0%	7
Tin/Steel Cans	1.3%	0.3%	1,223	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.1%	0.1%	59
Other Ferrous Metal	0.7%	0.3%	636	Batteries	0.4%	0.4%	355
CRV Aluminum Cans	0.4%	0.1%	341	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	5	SPECIAL WASTES	1.8%		1,718
Other Non-Ferrous Metal	0.5%	0.3%	467	Ash	0.1%	0.1%	57
Remainder/Composite Metal	3.5%	3.2%	3,364	Sewage Solids	0.0%	0.0%	0
PLASTIC	8.0%		7,613	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.5%	0.1%	435	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.2%	0.1%	159	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.2%	0.1%	155	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.5%	0.1%	448	Remainder/Composite Special Waste	1.7%	1.0%	1,661
Miscellaneous Plastic Containers	0.7%	0.3%	658	MIXED RESIDUE	2.5%		2,424
Film Plastic	4.0%	0.8%	3,852	Mixed Residue	2.5%	0.7%	2,424
Durable Plastic Items	0.6%	0.2%	528	Total Percent	100.0%		
Remainder/Composite Plastic	1.4%	0.6%	1,378				
Sample Count	18			Total 1999 Tons			95,137

TABLE 46: COMPOSITION OF DISPOSED MULTIFAMILY RESIDENTIAL WASTE, CENTRAL REGION

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	37.6%		35,775	ORGANIC	30.9%		29,354
Uncoated Corrugated Cardboard	8.9%	2.7%	8,485	Food	14.2%	3.5%	13,484
Waxed Corrugated Cardboard	0.2%	0.2%	143	Leaves and Grass	5.5%	4.7%	5,209
Paper Bags	1.6%	1.7%	1,486	Prunings and Trimmings	3.9%	2.2%	3,663
Newspaper	10.0%	2.5%	9,530	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	1.2%	0.6%	1,149	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.1%	0.1%	112	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	14	Textiles	2.6%	1.2%	2,519
Other Office Paper	0.5%	0.2%	471	Diapers	2.7%	1.6%	2,543
Magazines and Catalogs	1.8%	0.8%	1,670	Remainder/Composite Organic	2.0%	0.8%	1,936
Phone Books and Directories	1.1%	0.7%	1,087	CONSTRUCTION & DEMOLITION	10.6%		10,098
Other Miscellaneous Paper	4.8%	1.0%	4,609	Concrete	4.8%	7.7%	4,564
Remainder/Composite Paper	7.4%	1.1%	7,016	Asphalt Paving	0.0%	0.0%	0
GLASS	3.3%		3,168	Asphalt Roofing	1.0%	1.6%	937
CRV Clear Bottles	0.8%	0.3%	793	Non-Treated Lumber	0.4%	0.2%	399
Non-CRV Clear Bottles and Containers	1.0%	0.4%	989	Treated Lumber	1.8%	2.0%	1,728
CRV Brown Bottles	0.5%	0.2%	464	Gypsum Board	0.3%	0.4%	296
Non-CRV Brown Bottles and Containers	0.1%	0.1%	86	Rock, Soil and Fines	0.9%	1.1%	901
CRV Other Colored Bottles	0.7%	0.3%	681	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	10
Non-CRV & Other Colored Bottles and Containers	0.1%	0.1%	55	Carpet & Carpet Padding	1.0%	1.2%	956
Flat Glass	0.0%	0.0%	22	Remainder/Composite Construction and Demolition	0.3%	0.4%	308
Remainder/Composite Glass	0.1%	0.1%	78	HOUSEHOLD HAZARDOUS	0.1%		138
METAL	6.5%		6,180	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.9%	0.3%	879	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	2.1%	2.0%	1,985	Batteries	0.0%	0.0%	18
CRV Aluminum Cans	0.3%	0.2%	254	Remainder/Composite Household Hazardous	0.1%	0.2%	120
Non-CRV Aluminum Cans	0.0%	0.0%	17	SPECIAL WASTES	1.4%		1,341
Other Non-Ferrous Metal	0.3%	0.1%	251	Ash	0.0%	0.0%	0
Remainder/Composite Metal	2.9%	1.8%	2,795	Sewage Solids	0.0%	0.0%	0
PLASTIC	7.6%		7,190	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.4%	0.1%	342	Treated Medical Waste	0.0%	0.0%	1
Non-CRV HDPE Containers	0.2%	0.1%	155	Bulky Items	0.2%	0.3%	196
CRV PETE Containers	0.2%	0.1%	186	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.6%	0.2%	583	Remainder/Composite Special Waste	1.2%	0.9%	1,145
Miscellaneous Plastic Containers	0.6%	0.1%	523	MIXED RESIDUE	2.0%		1,893
Film Plastic	3.1%	0.7%	2,975	Mixed Residue	2.0%	1.0%	1,893
Durable Plastic Items	1.3%	0.7%	1,276				
Remainder/Composite Plastic	1.2%	0.3%	1,149	Total Percent	100.0%		
Sample Count	18		Total 1999 Tons				95,137

TABLE 47: COMPOSITION OF DISPOSED MULTIFAMILY RESIDENTIAL WASTE, SOUTH REGION

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	29.3%		9,894	ORGANIC	43.7%		14,749
Uncoated Corrugated Cardboard	6.0%	1.0%	2,036	Food	16.4%	2.9%	5,545
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	11.6%	5.5%	3,909
Paper Bags	0.8%	0.3%	254	Prunings and Trimmings	6.2%	2.8%	2,081
Newspaper	9.0%	2.6%	3,055	Branches and Stumps	0.0%	0.1%	13
White Ledger Paper	1.0%	0.4%	330	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.1%	0.1%	41	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	5	Textiles	4.1%	1.3%	1,397
Other Office Paper	0.7%	0.5%	220	Diapers	3.7%	0.9%	1,260
Magazines and Catalogs	1.0%	0.5%	345	Remainder/Composite Organic	1.6%	0.5%	543
Phone Books and Directories	0.6%	0.4%	209	CONSTRUCTION & DEMOLITION	9.9%		3,345
Other Miscellaneous Paper	4.8%	1.0%	1,608	Concrete	1.0%	1.7%	348
Remainder/Composite Paper	5.3%	0.9%	1,791	Asphalt Paving	0.0%	0.0%	0
GLASS	2.6%		870	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	1.1%	0.4%	366	Non-Treated Lumber	0.6%	0.3%	199
Non-CRV Clear Bottles and Containers	0.8%	0.3%	254	Treated Lumber	0.2%	0.1%	61
CRV Brown Bottles	0.3%	0.2%	116	Gypsum Board	0.0%	0.0%	11
Non-CRV Brown Bottles and Containers	0.1%	0.1%	18	Rock, Soil and Fines	1.6%	2.0%	528
CRV Other Colored Bottles	0.2%	0.1%	54	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	11	Carpet & Carpet Padding	4.4%	4.2%	1,483
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	2.1%	1.7%	715
Remainder/Composite Glass	0.1%	0.1%	50	HOUSEHOLD HAZARDOUS	0.1%		18
METAL	4.1%		1,382	Paint	0.0%	0.0%	0
Tin/Steel Cans	1.4%	0.4%	472	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.6%	0.5%	199	Batteries	0.1%	0.0%	17
CRV Aluminum Cans	0.2%	0.1%	68	Remainder/Composite Household Hazardous	0.0%	0.0%	1
Non-CRV Aluminum Cans	0.2%	0.3%	73	SPECIAL WASTES	1.1%		375
Other Non-Ferrous Metal	0.6%	0.4%	187	Ash	0.0%	0.1%	13
Remainder/Composite Metal	1.1%	0.9%	383	Sewage Solids	0.0%	0.0%	0
PLASTIC	8.0%		2,686	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.4%	0.1%	120	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.2%	0.1%	82	Bulky Items	0.8%	1.0%	254
CRV PETE Containers	0.2%	0.1%	77	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.5%	0.1%	168	Remainder/Composite Special Waste	0.3%	0.4%	108
Miscellaneous Plastic Containers	0.3%	0.1%	118	MIXED RESIDUE	1.3%		455
Film Plastic	3.7%	0.9%	1,260	Mixed Residue	1.3%	0.7%	455
Durable Plastic Items	1.3%	0.5%	449				
Remainder/Composite Plastic	1.2%	0.3%	412	Total Percent	100.0%		
Sample Count	18		Total 1999 Tons				33,773

COMPOSITION OF COMBINED DISPOSED RESIDENTIAL WASTE BY SEASON

Samples of disposed residential MSW (single-family and multifamily) and disposed residential C&D waste were analyzed by season to highlight seasonal differences in disposal. For each season, the tonnage figures used for relative weighting of each sector were the same as those described in Table 5.

FIGURE 9: COMBINED DISPOSED RESIDENTIAL WASTE, AUTUMN

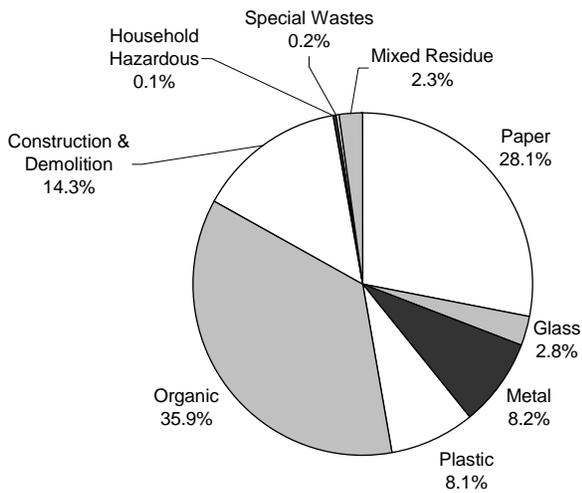


FIGURE 10: COMBINED DISPOSED RESIDENTIAL WASTE, WINTER

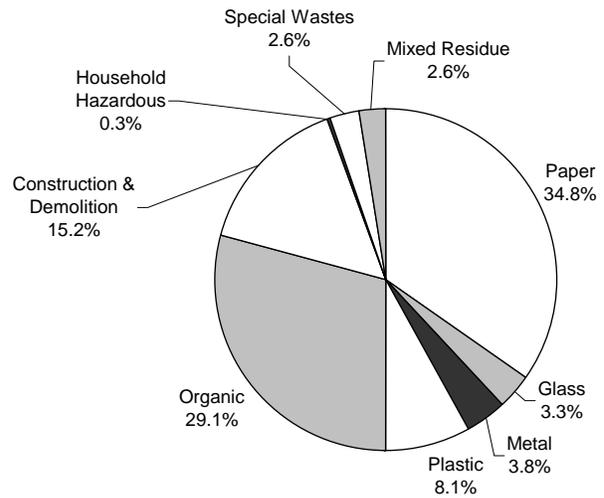


FIGURE 11: COMBINED DISPOSED RESIDENTIAL WASTE, SPRING

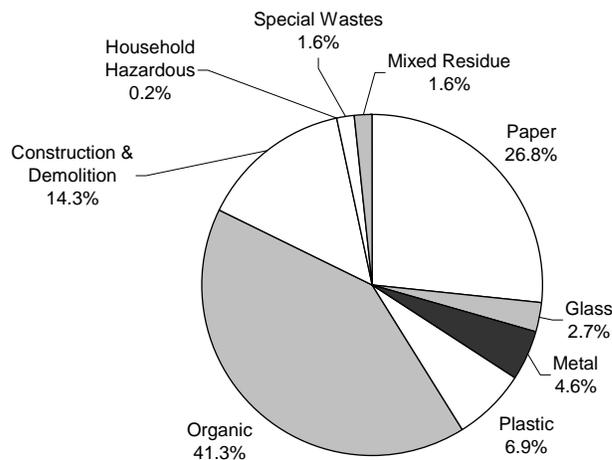


TABLE 48: COMPOSITION OF COMBINED DISPOSED RESIDENTIAL WASTE, AUTUMN

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	28.1%		ORGANIC	35.9%	
Uncoated Corrugated Cardboard	4.5%	0.8%	Food	13.2%	2.3%
Waxed Corrugated Cardboard	0.4%	0.5%	Leaves and Grass	8.4%	3.1%
Paper Bags	1.1%	0.7%	Prunings and Trimmings	4.8%	1.7%
Newspaper	6.7%	1.5%	Branches and Stumps	1.1%	0.8%
White Ledger Paper	1.0%	0.3%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.1%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	2.4%	0.7%
Other Office Paper	0.4%	0.1%	Diapers	2.9%	0.7%
Magazines and Catalogs	1.7%	0.4%	Remainder/Composite Organic	3.1%	0.8%
Phone Books and Directories	0.2%	0.1%	CONSTRUCTION & DEMOLITION	14.3%	
Other Miscellaneous Paper	4.7%	0.7%	Concrete	4.0%	3.4%
Remainder/Composite Paper	7.2%	0.9%	Asphalt Paving	0.0%	0.0%
GLASS	2.8%		Asphalt Roofing	1.3%	0.9%
CRV Clear Bottles	0.7%	0.2%	Non-Treated Lumber	2.4%	1.4%
Non-CRV Clear Bottles and Containers	0.5%	0.1%	Treated Lumber	2.4%	0.9%
CRV Brown Bottles	0.4%	0.2%	Gypsum Board	0.9%	0.5%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	0.8%	0.5%
CRV Other Colored Bottles	0.6%	0.2%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	1.1%	0.8%
Flat Glass	0.3%	0.4%	Remainder/Composite Construction and Demolition	1.3%	0.6%
Remainder/Composite Glass	0.2%	0.1%	HOUSEHOLD HAZARDOUS	0.1%	
METAL	8.2%		Paint	0.0%	0.0%
Tin/Steel Cans	1.0%	0.2%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	3.2%	2.4%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.2%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.1%
Non-CRV Aluminum Cans	0.0%	0.1%	SPECIAL WASTES	0.2%	
Other Non-Ferrous Metal	0.4%	0.2%	Ash	0.0%	0.0%
Remainder/Composite Metal	3.3%	1.5%	Sewage Solids	0.0%	0.0%
PLASTIC	8.1%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.3%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.2%	0.0%	Bulky Items	0.2%	0.1%
CRV PETE Containers	0.2%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.5%	0.1%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.5%	0.1%	MIXED RESIDUE	2.3%	
Film Plastic	3.7%	0.5%	Mixed Residue	2.3%	0.6%
Durable Plastic Items	1.0%	0.2%			
Remainder/Composite Plastic	1.8%	0.3%	Total Percent	100.0%	
Sample Count	99				

TABLE 49: COMPOSITION OF COMBINED DISPOSED RESIDENTIAL WASTE, WINTER

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	34.8%		ORGANIC	29.1%	
Uncoated Corrugated Cardboard	6.6%	1.2%	Food	13.5%	1.4%
Waxed Corrugated Cardboard	0.0%	0.1%	Leaves and Grass	5.6%	1.7%
Paper Bags	0.8%	0.2%	Prunings and Trimmings	2.9%	1.2%
Newspaper	9.3%	1.2%	Branches and Stumps	0.4%	0.7%
White Ledger Paper	1.5%	0.4%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.2%	0.1%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	2.4%	0.5%
Other Office Paper	1.1%	0.3%	Diapers	2.5%	0.6%
Magazines and Catalogs	2.5%	0.4%	Remainder/Composite Organic	1.8%	0.4%
Phone Books and Directories	0.3%	0.2%	CONSTRUCTION & DEMOLITION	15.2%	
Other Miscellaneous Paper	5.5%	0.8%	Concrete	1.7%	1.2%
Remainder/Composite Paper	7.0%	0.8%	Asphalt Paving	0.0%	0.0%
GLASS	3.3%		Asphalt Roofing	0.7%	0.8%
CRV Clear Bottles	0.6%	0.2%	Non-Treated Lumber	1.0%	0.6%
Non-CRV Clear Bottles and Containers	0.9%	0.2%	Treated Lumber	3.0%	1.3%
CRV Brown Bottles	0.5%	0.2%	Gypsum Board	1.4%	0.9%
Non-CRV Brown Bottles and Containers	0.1%	0.0%	Rock, Soil and Fines	3.2%	1.3%
CRV Other Colored Bottles	0.6%	0.2%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	2.1%	1.2%
Flat Glass	0.2%	0.2%	Remainder/Composite Construction and Demolition	2.1%	0.9%
Remainder/Composite Glass	0.3%	0.1%	HOUSEHOLD HAZARDOUS	0.4%	
METAL	3.8%		Paint	0.0%	0.0%
Tin/Steel Cans	1.2%	0.1%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	0.9%	0.3%	Batteries	0.2%	0.2%
CRV Aluminum Cans	0.2%	0.0%	Remainder/Composite Household Hazardous	0.1%	0.1%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	2.6%	
Other Non-Ferrous Metal	0.5%	0.2%	Ash	0.1%	0.1%
Remainder/Composite Metal	1.0%	0.4%	Sewage Solids	0.0%	0.0%
PLASTIC	8.2%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.3%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.2%	0.0%	Bulky Items	0.4%	0.4%
CRV PETE Containers	0.2%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.6%	0.1%	Remainder/Composite Special Waste	2.0%	0.6%
Miscellaneous Plastic Containers	0.6%	0.1%	MIXED RESIDUE	2.6%	
Film Plastic	4.1%	0.3%	Mixed Residue	2.6%	0.4%
Durable Plastic Items	1.1%	0.3%			
Remainder/Composite Plastic	1.1%	0.2%	Total Percent	100.0%	
Sample Count	79				

TABLE 50: COMPOSITION OF COMBINED DISPOSED RESIDENTIAL WASTE, SPRING

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	26.8%		ORGANIC	41.3%	
Uncoated Corrugated Cardboard	4.0%	0.6%	Food	15.2%	2.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	12.0%	3.2%
Paper Bags	0.5%	0.1%	Prunings and Trimmings	6.0%	2.5%
Newspaper	7.2%	1.2%	Branches and Stumps	0.7%	0.6%
White Ledger Paper	1.1%	0.4%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.2%	0.1%	Manures	0.1%	0.1%
Computer Paper	0.1%	0.1%	Textiles	2.5%	0.8%
Other Office Paper	0.6%	0.2%	Diapers	3.2%	0.9%
Magazines and Catalogs	1.2%	0.3%	Remainder/Composite Organic	1.6%	0.3%
Phone Books and Directories	1.2%	0.5%	CONSTRUCTION & DEMOLITION	14.3%	
Other Miscellaneous Paper	4.4%	0.6%	Concrete	2.7%	1.3%
Remainder/Composite Paper	6.2%	0.7%	Asphalt Paving	0.0%	0.0%
GLASS	2.7%		Asphalt Roofing	0.1%	0.1%
CRV Clear Bottles	0.6%	0.2%	Non-Treated Lumber	1.0%	0.6%
Non-CRV Clear Bottles and Containers	0.6%	0.1%	Treated Lumber	4.3%	1.6%
CRV Brown Bottles	0.4%	0.1%	Gypsum Board	0.1%	0.1%
Non-CRV Brown Bottles and Containers	0.1%	0.1%	Rock, Soil and Fines	2.0%	1.3%
CRV Other Colored Bottles	0.3%	0.2%	Contaminated soil, street sweepings, drain cleanings	0.1%	0.1%
Non-CRV & Other Colored Bottles and Containers	0.5%	0.2%	Carpet & Carpet Padding	1.4%	1.0%
Flat Glass	0.2%	0.3%	Remainder/Composite Construction and Demolition	2.5%	1.2%
Remainder/Composite Glass	0.1%	0.1%	HOUSEHOLD HAZARDOUS	0.2%	
METAL	4.6%		Paint	0.1%	0.1%
Tin/Steel Cans	1.1%	0.2%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.1%	0.1%	Used Oil	0.1%	0.1%
Other Ferrous Metal	1.1%	0.8%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.3%	0.1%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.1%	0.0%	SPECIAL WASTES	1.6%	
Other Non-Ferrous Metal	0.3%	0.1%	Ash	0.1%	0.1%
Remainder/Composite Metal	1.8%	0.9%	Sewage Solids	0.0%	0.0%
PLASTIC	6.9%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.4%	0.1%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.2%	0.0%	Bulky Items	0.4%	0.5%
CRV PETE Containers	0.1%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.5%	0.1%	Remainder/Composite Special Waste	1.1%	0.7%
Miscellaneous Plastic Containers	0.8%	0.1%	MIXED RESIDUE	1.6%	
Film Plastic	2.9%	0.3%	Mixed Residue	1.6%	0.7%
Durable Plastic Items	1.0%	0.2%			
Remainder/Composite Plastic	1.0%	0.2%	Total Percent	100.0%	
Sample Count	91				

FREQUENCY OF "PURE LOADS" OF C&D WASTE AT MIRAMAR LANDFILL

All of the C&D loads sampled in this study were analyzed to determine the frequency of loads that contain 80% or more of a single material type. Table 51 shows the results of this frequency analysis for C&D loads according to the origin of the loads. The numbers for *residential*, *commercial*, and *military* C&D loads reflect loads coming to Miramar Landfill from both within and outside the City of San Diego.

TABLE 51: FREQUENCY OF C&D PURE LOADS (80% OR GREATER) OF SELECTED MATERIALS

Material Type > 80%	Residential	Commercial	Military	City Departments				Total	Percent of all Loads
				Streets	Schools	Water & Metro	Other Dept.		
Yard Waste	5	39	3				3	50	4.4%
Concrete	13	29	1	2				45	3.9%
Asphalt Paving		2		1	1	2		6	0.5%
Asphalt Roofing	3	25	2				1	31	2.7%
Non-Treated Lumber	2	9		1				12	1.0%
Gypsum Board	2	39	1					42	3.7%
Rock, Soil & Fines	4	54	18	75	3	17	7	178	15.5%
Carpet & Carpet Padding	1	21						22	1.9%
Bulky Items		1	1					2	0.2%
Metals		4						4	0.3%
Total > 80%	30	223	26	79	4	19	11	392	34.1%
Mixed C&D	63	570	57	40	2	14	11	757	65.9%
Total C&D Loads Sampled	93	793	83	119	6	33	22	1,149	100.0%

In addition, Table 52 shows the frequency of C&D loads containing 80% or more of *combined inert materials*, which were defined to include the material categories *concrete*, *asphalt paving*, and *rocks, soil, and fines*.

TABLE 52: FREQUENCY OF C&D PURE LOADS (80% OR GREATER) OF COMBINED INERT MATERIALS

Material Type	Residential	Commercial	Military	City Departments				Total	Percent of all Loads
				Streets	Schools	Water & Metro	Other Dept.		
Combined Inerts > 80%	21	111	27	97	6	24	8	294	25.6%
Other C&D Loads	72	682	56	22	0	9	14	855	74.4%
Total C&D Loads Sampled	93	793	83	119	6	33	22	1,149	100.0%

COMPOSITION OF COMMERCIAL WASTE BY SECTOR AND VEHICLE TYPE

TABLE 53: COMPOSITION OF COMMERCIAL MSW DISPOSED BY IN-CITY GENERATORS – OPEN DRAG-ON LOADS

<i>Calculated at 90% confidence interval</i>			Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER			21.7%		28,405	ORGANIC	3.9%		5,129
Uncoated Corrugated Cardboard	8.2%	3.5%	10,751	Food	1.4%	1.0%	1,881		
Waxed Corrugated Cardboard	4.5%	5.9%	5,872	Leaves and Grass	0.7%	0.7%	904		
Paper Bags	0.1%	0.1%	187	Prunings and Trimmings	0.5%	0.4%	680		
Newspaper	0.6%	0.5%	816	Branches and Stumps	0.1%	0.1%	109		
White Ledger Paper	1.1%	0.6%	1,433	Agricultural Crop Residues	0.0%	0.0%	0		
Colored Ledger Paper	0.1%	0.1%	86	Manures	0.0%	0.0%	0		
Computer Paper	0.1%	0.1%	100	Textiles	0.3%	0.3%	400		
Other Office Paper	0.2%	0.1%	280	Diapers	0.0%	0.0%	28		
Magazines and Catalogs	0.3%	0.2%	376	Remainder/Composite Organic	0.9%	0.7%	1,128		
Phone Books and Directories	0.3%	0.3%	337	CONSTRUCTION & DEMOLITION	46.1%		60,245		
Other Miscellaneous Paper	2.0%	0.9%	2,594	Concrete	2.4%	2.4%	3,185		
Remainder/Composite Paper	4.3%	1.7%	5,573	Asphalt Paving	0.0%	0.0%	17		
GLASS	2.6%		3,390	Asphalt Roofing	0.2%	0.3%	216		
CRV Clear Bottles	0.2%	0.2%	250	Non-Treated Lumber	14.1%	7.2%	18,461		
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	5.9%	4.8%	7,714		
CRV Brown Bottles	0.1%	0.1%	110	Gypsum Board	0.1%	0.1%	137		
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	2.4%	3.9%	3,157		
CRV Other Colored Bottles	0.0%	0.0%	23	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0		
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	17.8%	10.9%	23,308		
Flat Glass	2.1%	3.0%	2,704	Remainder/Composite Construction and Demolition	3.1%	3.2%	4,050		
Remainder/Composite Glass	0.2%	0.3%	302	HOUSEHOLD HAZARDOUS	0.1%		94		
METAL	10.1%		13,160	Paint	0.0%	0.0%	0		
Tin/Steel Cans	0.1%	0.0%	72	Vehicle and Equipment Fluids	0.0%	0.0%	0		
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0		
Other Ferrous Metal	7.6%	7.8%	9,935	Batteries	0.1%	0.1%	94		
CRV Aluminum Cans	0.1%	0.0%	81	Remainder/Composite Household Hazardous	0.0%	0.0%	0		
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	6.2%		8,046		
Other Non-Ferrous Metal	0.2%	0.2%	309	Ash	0.0%	0.0%	6		
Remainder/Composite Metal	2.1%	1.4%	2,763	Sewage Solids	0.0%	0.0%	0		
PLASTIC	9.2%		11,999	Industrial Sludge	0.0%	0.0%	0		
CRV HDPE Containers	0.3%	0.4%	423	Treated Medical Waste	0.0%	0.0%	0		
Non-CRV HDPE Containers	0.0%	0.0%	8	Bulky Items	6.1%	4.2%	8,040		
CRV PETE Containers	0.0%	0.0%	37	Tires	0.0%	0.0%	0		
Non-CRV PETE Containers	0.2%	0.2%	205	Remainder/Composite Special Waste	0.0%	0.0%	0		
Miscellaneous Plastic Containers	0.8%	0.9%	1,047	MIXED RESIDUE	0.3%		345		
Film Plastic	2.5%	1.1%	3,266	Mixed Residue	0.3%	0.2%	345		
Durable Plastic Items	2.6%	2.4%	3,350	Total Percent	100.0%				
Remainder/Composite Plastic	2.8%	1.5%	3,664						
Sample Count	33		Total 1999 Tons				130,814		

TABLE 54: COMPOSITION OF COMMERCIAL MSW DISPOSED BY IN-CITY GENERATORS – COMPACTOR DRAG-ON LOADS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	41.4%		44,064	ORGANIC	24.3%		25,867
Uncoated Corrugated Cardboard	12.4%	5.1%	13,220	Food	14.8%	4.7%	15,753
Waxed Corrugated Cardboard	0.2%	0.2%	243	Leaves and Grass	2.7%	3.3%	2,853
Paper Bags	0.7%	0.4%	795	Prunings and Trimmings	2.4%	2.6%	2,600
Newspaper	4.2%	1.7%	4,497	Branches and Stumps	0.1%	0.1%	71
White Ledger Paper	2.0%	1.1%	2,116	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.1%	0.0%	65	Manures	0.0%	0.0%	0
Computer Paper	0.2%	0.1%	214	Textiles	2.4%	1.9%	2,554
Other Office Paper	0.4%	0.3%	379	Diapers	0.2%	0.1%	196
Magazines and Catalogs	1.0%	0.5%	1,043	Remainder/Composite Organic	1.7%	2.1%	1,841
Phone Books and Directories	0.2%	0.3%	216	CONSTRUCTION & DEMOLITION	10.8%		11,510
Other Miscellaneous Paper	6.3%	3.0%	6,667	Concrete	0.8%	0.9%	839
Remainder/Composite Paper	13.7%	5.4%	14,610	Asphalt Paving	0.0%	0.1%	45
GLASS	3.9%		4,138	Asphalt Roofing	0.3%	0.3%	344
CRV Clear Bottles	1.1%	0.5%	1,164	Non-Treated Lumber	4.2%	3.7%	4,492
Non-CRV Clear Bottles and Containers	0.5%	0.4%	517	Treated Lumber	0.6%	0.7%	643
CRV Brown Bottles	0.3%	0.2%	312	Gypsum Board	0.1%	0.2%	106
Non-CRV Brown Bottles and Containers	0.0%	0.0%	22	Rock, Soil and Fines	2.9%	3.7%	3,097
CRV Other Colored Bottles	1.5%	1.5%	1,595	Contaminated soil, street sweepings, drain cleanings	0.1%	0.1%	53
Non-CRV & Other Colored Bottles and Containers	0.2%	0.2%	176	Carpet & Carpet Padding	0.1%	0.1%	66
Flat Glass	0.0%	0.0%	45	Remainder/Composite Construction and Demolition	1.7%	1.7%	1,823
Remainder/Composite Glass	0.3%	0.2%	309	HOUSEHOLD HAZARDOUS	0.1%		57
METAL	3.9%		4,118	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.5%	0.2%	580	Vehicle and Equipment Fluids	0.0%	0.0%	16
Major Appliances	0.3%	0.5%	355	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	1.2%	0.6%	1,236	Batteries	0.0%	0.0%	13
CRV Aluminum Cans	0.4%	0.2%	465	Remainder/Composite Household Hazardous	0.0%	0.0%	28
Non-CRV Aluminum Cans	0.0%	0.0%	49	SPECIAL WASTES	0.5%		561
Other Non-Ferrous Metal	0.5%	0.3%	524	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.9%	0.5%	908	Sewage Solids	0.0%	0.0%	0
PLASTIC	14.0%		14,929	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.4%	0.2%	440	Treated Medical Waste	0.5%	0.9%	561
Non-CRV HDPE Containers	0.1%	0.1%	109	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.1%	0.0%	88	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.4%	0.2%	404	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.7%	0.4%	709	MIXED RESIDUE	1.0%		1,079
Film Plastic	8.5%	3.5%	8,986	Mixed Residue	1.0%	0.4%	1,079
Durable Plastic Items	2.2%	1.1%	2,297				
Remainder/Composite Plastic	1.8%	0.5%	1,897	Total Percent	100.0%		
Sample Count	33		Total 1999 Tons				106,324

TABLE 55: COMPOSITION OF COMMERCIAL MSW DISPOSED BY IN-CITY GENERATORS – PACKERS AND OTHER VEHICLES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	38.8%		83,231	ORGANIC	28.4%		60,983
Uncoated Corrugated Cardboard	9.3%	2.3%	19,914	Food	15.7%	3.7%	33,746
Waxed Corrugated Cardboard	1.0%	0.7%	2,135	Leaves and Grass	5.5%	3.1%	11,895
Paper Bags	0.8%	0.3%	1,809	Prunings and Trimmings	2.1%	1.3%	4,414
Newspaper	4.3%	1.1%	9,172	Branches and Stumps	0.4%	0.7%	861
White Ledger Paper	3.5%	1.3%	7,492	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	1.4%	1.3%	2,970	Manures	0.0%	0.0%	0
Computer Paper	0.3%	0.3%	664	Textiles	1.6%	0.7%	3,359
Other Office Paper	0.7%	0.2%	1,437	Diapers	1.2%	0.6%	2,670
Magazines and Catalogs	1.4%	0.4%	2,912	Remainder/Composite Organic	1.9%	0.8%	4,038
Phone Books and Directories	0.5%	0.4%	1,065	CONSTRUCTION & DEMOLITION	7.1%		15,171
Other Miscellaneous Paper	6.6%	3.1%	14,144	Concrete	0.0%	0.0%	33
Remainder/Composite Paper	9.1%	1.5%	19,517	Asphalt Paving	0.0%	0.0%	0
GLASS	2.9%		6,159	Asphalt Roofing	0.0%	0.0%	7
CRV Clear Bottles	1.0%	0.3%	2,088	Non-Treated Lumber	3.8%	2.3%	8,168
Non-CRV Clear Bottles and Containers	0.4%	0.2%	873	Treated Lumber	0.8%	0.8%	1,671
CRV Brown Bottles	0.3%	0.1%	741	Gypsum Board	0.0%	0.0%	49
Non-CRV Brown Bottles and Containers	0.0%	0.0%	26	Rock, Soil and Fines	0.5%	0.7%	1,056
CRV Other Colored Bottles	0.4%	0.3%	868	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.1%	0.1%	275	Carpet & Carpet Padding	1.4%	1.2%	3,060
Flat Glass	0.4%	0.5%	896	Remainder/Composite Construction and Demolition	0.5%	0.4%	1,128
Remainder/Composite Glass	0.2%	0.2%	392	HOUSEHOLD HAZARDOUS	0.4%		757
METAL	7.1%		15,176	Paint	0.0%	0.0%	12
Tin/Steel Cans	0.9%	0.4%	1,986	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	16
Other Ferrous Metal	2.2%	1.3%	4,772	Batteries	0.2%	0.2%	382
CRV Aluminum Cans	0.2%	0.1%	472	Remainder/Composite Household Hazardous	0.2%	0.2%	347
Non-CRV Aluminum Cans	0.0%	0.0%	15	SPECIAL WASTES	3.8%		8,100
Other Non-Ferrous Metal	0.3%	0.1%	560	Ash	0.0%	0.0%	0
Remainder/Composite Metal	3.4%	2.5%	7,371	Sewage Solids	0.0%	0.0%	0
PLASTIC	10.2%		21,942	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.4%	0.1%	795	Treated Medical Waste	0.7%	1.1%	1,457
Non-CRV HDPE Containers	0.1%	0.0%	189	Bulky Items	2.3%	1.9%	4,843
CRV PETE Containers	0.1%	0.0%	230	Tires	0.7%	0.8%	1,410
Non-CRV PETE Containers	0.5%	0.2%	1,117	Remainder/Composite Special Waste	0.2%	0.2%	389
Miscellaneous Plastic Containers	0.4%	0.1%	788	MIXED RESIDUE	1.5%		3,142
Film Plastic	5.4%	0.9%	11,640	Mixed Residue	1.5%	0.5%	3,142
Durable Plastic Items	1.2%	0.5%	2,661				
Remainder/Composite Plastic	2.1%	0.5%	4,521	Total Percent	100.0%		
Sample Count	36		Total 1999 Tons				214,661

TABLE 56: COMPOSITION OF COMMERCIAL C&D DISPOSED BY IN-CITY GENERATORS – 2-AXLE TRUCKS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	3.6%		3,064	ORGANIC	5.1%		4,346
Uncoated Corrugated Cardboard	3.2%	1.0%	2,771	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.1%	0.1%	47	Leaves and Grass	0.6%	0.4%	490
Paper Bags	0.1%	0.1%	75	Prunings and Trimmings	3.0%	1.4%	2,537
Newspaper	0.0%	0.0%	0	Branches and Stumps	1.3%	1.0%	1,118
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	22	Remainder/Composite Organic	0.2%	0.3%	200
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	85.3%		72,736
Other Miscellaneous Paper	0.1%	0.0%	51	Concrete	11.6%	4.0%	9,927
Remainder/Composite Paper	0.1%	0.1%	100	Asphalt Paving	0.5%	0.5%	450
GLASS	0.4%		313	Asphalt Roofing	13.2%	4.2%	11,280
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	3.3%	1.2%	2,826
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	14.2%	3.0%	12,119
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	15.5%	4.2%	13,236
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	19.8%	6.4%	16,916
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	1.6%	0.6%	1,347
Flat Glass	0.4%	0.3%	313	Remainder/Composite Construction and Demolition	5.4%	1.5%	4,636
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	4.0%		3,442	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	15	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	3.6%	1.5%	3,033	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	1.2%		1,058
Other Non-Ferrous Metal	0.2%	0.2%	150	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.3%	0.3%	243	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.4%		299	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	1	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	4	Bulky Items	1.2%	0.7%	1,058
CRV PETE Containers	0.0%	0.0%	1	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	1	MIXED RESIDUE	0.0%		0
Film Plastic	0.1%	0.0%	105	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.1%	0.0%	83	Total Percent	100.0%		
Remainder/Composite Plastic	0.1%	0.1%	103				
Sample Count	223			Total 1999 Tons			85,258

TABLE 57: COMPOSITION OF COMMERCIAL C&D DISPOSED BY IN-CITY GENERATORS – 3-AXLE TRUCKS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.8%		24	ORGANIC	19.9%		619
Uncoated Corrugated Cardboard	0.6%	0.6%	19	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	16.1%	12.6%	503
Newspaper	0.2%	0.3%	6	Branches and Stumps	3.7%	3.4%	116
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	76.6%		2,385
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	6.9%	5.7%	214
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	0.5%	0.6%	15
GLASS	0.3%		9	Asphalt Roofing	5.3%	6.0%	165
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	1.4%	1.8%	43
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	7.4%	7.3%	229
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	2.1%	3.5%	65
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	51.4%	18.0%	1,601
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.5%	0.4%	14
Flat Glass	0.3%	0.5%	9	Remainder/Composite Construction and Demolition	1.3%	1.0%	40
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	2.2%		67	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	2.0%	1.7%	64	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.3%		8
Other Non-Ferrous Metal	0.1%	0.2%	3	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.1%		2	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.3%	0.4%	8
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	1	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	1	Total Percent	100.0%		
Remainder/Composite Plastic	0.0%	0.0%	0				
Sample Count	25			Total 1999 Tons			3,115

TABLE 58: COMPOSITION OF COMMERCIAL C&D DISPOSED BY IN-CITY GENERATORS – SEMI TRUCKS AND PACKERS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.1%		42	ORGANIC	19.2%		6,273
Uncoated Corrugated Cardboard	0.1%	0.1%	32	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.2%	0.2%	54
Paper Bags	0.0%	0.0%	2	Prunings and Trimmings	6.8%	3.7%	2,202
Newspaper	0.0%	0.0%	0	Branches and Stumps	12.3%	5.0%	4,017
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	76.1%		24,803
Other Miscellaneous Paper	0.0%	0.0%	8	Concrete	3.3%	1.9%	1,071
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	0.3%	0.3%	106
GLASS	0.0%		0	Asphalt Roofing	3.1%	1.3%	1,003
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	12.2%	4.9%	3,967
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	25.1%	5.8%	8,192
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	1.1%	1.0%	374
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	27.8%	7.6%	9,060
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.4%	0.3%	117
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	2.8%	1.6%	911
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	4.0%		1,292	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	3.8%	1.4%	1,249	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.5%		157
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.1%	0.2%	43	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.1%		41	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.2%	0.2%	71
CRV PETE Containers	0.0%	0.0%	0	Tires	0.3%	0.3%	86
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	9	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.1%	0.1%	31	Total Percent	100.0%		
Remainder/Composite Plastic	0.0%	0.0%	1				
Sample Count	68			Total 1999 Tons			32,607

TABLE 59: COMPOSITION OF COMMERCIAL C&D DISPOSED BY IN-CITY GENERATORS – OPEN DRAG-ON LOADS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	3.6%		3,371	ORGANIC	8.1%		7,683
Uncoated Corrugated Cardboard	3.2%	0.6%	3,000	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.2%	0.2%	197
Paper Bags	0.1%	0.1%	141	Prunings and Trimmings	4.3%	1.6%	4,081
Newspaper	0.0%	0.0%	28	Branches and Stumps	1.2%	0.6%	1,162
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.1%	0.0%	73
Other Office Paper	0.0%	0.0%	5	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	13	Remainder/Composite Organic	2.3%	1.7%	2,170
Phone Books and Directories	0.0%	0.0%	11	CONSTRUCTION & DEMOLITION	76.0%		71,881
Other Miscellaneous Paper	0.1%	0.0%	96	Concrete	12.1%	2.5%	11,418
Remainder/Composite Paper	0.1%	0.0%	76	Asphalt Paving	1.0%	1.2%	913
GLASS	0.8%		767	Asphalt Roofing	2.9%	1.9%	2,760
CRV Clear Bottles	0.0%	0.1%	31	Non-Treated Lumber	6.1%	1.5%	5,762
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	13.8%	2.2%	13,054
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	12.5%	2.2%	11,838
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	17.8%	3.7%	16,824
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	2.6%	0.9%	2,490
Flat Glass	0.7%	0.4%	643	Remainder/Composite Construction and Demolition	7.2%	1.0%	6,823
Remainder/Composite Glass	0.1%	0.1%	94	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	8.4%		7,925	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.1%	0.1%	87	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	7.1%	1.2%	6,677	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	5	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	2.6%		2,417
Other Non-Ferrous Metal	0.2%	0.1%	152	Ash	0.0%	0.0%	0
Remainder/Composite Metal	1.1%	0.6%	1,005	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.5%		479	Industrial Sludge	0.6%	1.0%	564
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	3	Bulky Items	1.9%	0.4%	1,789
CRV PETE Containers	0.0%	0.0%	1	Tires	0.1%	0.1%	64
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	3	MIXED RESIDUE	0.0%		0
Film Plastic	0.1%	0.0%	136	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.3%	0.2%	258	Total Percent	100.0%		
Remainder/Composite Plastic	0.1%	0.0%	78				
Sample Count	263			Total 1999 Tons			94,524

TABLE 60: COMPOSITION OF COMMERCIAL C&D DISPOSED BY IN-CITY GENERATORS – PICK-UP TRUCKS AND OTHER VEHICLES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	1.9%		1,984	ORGANIC	5.0%		5,354
Uncoated Corrugated Cardboard	1.4%	0.6%	1,507	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.1%	0.1%	160
Paper Bags	0.2%	0.2%	212	Prunings and Trimmings	2.5%	1.5%	2,624
Newspaper	0.0%	0.0%	0	Branches and Stumps	2.3%	1.7%	2,496
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.1%	0.1%	74
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.1%	0.1%	57	CONSTRUCTION & DEMOLITION	87.9%		93,997
Other Miscellaneous Paper	0.2%	0.2%	170	Concrete	15.2%	5.3%	16,277
Remainder/Composite Paper	0.0%	0.0%	38	Asphalt Paving	0.0%	0.0%	0
GLASS	1.0%		1,112	Asphalt Roofing	16.6%	8.1%	17,795
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	6.3%	3.1%	6,736
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	9.6%	2.9%	10,266
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	9.8%	3.0%	10,434
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	9.9%	4.6%	10,580
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.7%	1.2%	747
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	10.0%	3.6%	10,684
Flat Glass	1.0%	0.9%	1,112	Remainder/Composite Construction and Demolition	9.8%	3.3%	10,476
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	2.7%		2,920	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	2.5%	1.4%	2,677	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	1.3%		1,437
Other Non-Ferrous Metal	0.1%	0.1%	90	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.1%	0.2%	153	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.2%		188	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	2	Bulky Items	1.2%	0.5%	1,293
CRV PETE Containers	0.0%	0.0%	0	Tires	0.1%	0.2%	144
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.1%	0.1%	94	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	23	Total Percent	100.0%		
Remainder/Composite Plastic	0.1%	0.1%	68				
Sample Count	144			Total 1999 Tons			106,992

COMPOSITION OF DISPOSED MILITARY WASTE BY ORIGIN AND VEHICLE TYPE

TABLE 61: COMPOSITION OF DISPOSED MILITARY MSW GENERATED IN-CITY – PACKER TRUCKS

<i>Calculated at 90% confidence interval</i>	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	41.2%		9,353	ORGANIC	26.0%		5,899
Uncoated Corrugated Cardboard	8.7%	2.8%	1,977	Food	12.1%	5.0%	2,752
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	2.0%	2.8%	449
Paper Bags	1.2%	0.3%	262	Prunings and Trimmings	1.7%	2.2%	389
Newspaper	5.0%	1.8%	1,145	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	6.2%	4.9%	1,412	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.3%	0.3%	71	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	5	Textiles	6.2%	3.0%	1,411
Other Office Paper	1.1%	1.0%	245	Diapers	0.8%	1.1%	184
Magazines and Catalogs	1.4%	0.6%	308	Remainder/Composite Organic	3.1%	1.9%	714
Phone Books and Directories	0.3%	0.5%	71	CONSTRUCTION & DEMOLITION	5.1%		1,163
Other Miscellaneous Paper	7.1%	2.7%	1,622	Concrete	0.0%	0.0%	0
Remainder/Composite Paper	9.8%	1.8%	2,235	Asphalt Paving	0.0%	0.0%	0
GLASS	3.7%		852	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	1.6%	0.6%	367	Non-Treated Lumber	1.7%	1.4%	395
Non-CRV Clear Bottles and Containers	1.1%	1.3%	244	Treated Lumber	1.4%	2.3%	318
CRV Brown Bottles	0.5%	0.5%	124	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	0.2%	0.2%	34
CRV Other Colored Bottles	0.4%	0.4%	94	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	1.2%	2.0%	266
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.7%	0.6%	150
Remainder/Composite Glass	0.1%	0.1%	23	HOUSEHOLD HAZARDOUS	0.1%		13
METAL	9.0%		2,036	Paint	0.0%	0.0%	0
Tin/Steel Cans	1.2%	0.5%	272	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	6
Other Ferrous Metal	2.4%	1.8%	542	Batteries	0.0%	0.0%	3
CRV Aluminum Cans	0.3%	0.2%	73	Remainder/Composite Household Hazardous	0.0%	0.0%	4
Non-CRV Aluminum Cans	0.0%	0.0%	2	SPECIAL WASTES	3.6%		807
Other Non-Ferrous Metal	2.6%	2.5%	595	Ash	0.0%	0.0%	0
Remainder/Composite Metal	2.4%	1.7%	551	Sewage Solids	0.0%	0.0%	0
PLASTIC	9.9%		2,256	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.7%	0.3%	168	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.1%	0.0%	14	Bulky Items	3.6%	3.8%	807
CRV PETE Containers	0.1%	0.0%	20	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.3%	0.1%	76	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.4%	0.2%	100	MIXED RESIDUE	1.5%		338
Film Plastic	5.0%	1.4%	1,138	Mixed Residue	1.5%	1.4%	338
Durable Plastic Items	1.3%	0.7%	298	Total Percent	100.0%		
Remainder/Composite Plastic	1.9%	0.7%	442				
Sample Count	9			Total 1999 Tons			22,718

TABLE 62: COMPOSITION OF DISPOSED MILITARY MSW GENERATED IN-CITY – DRAG-ON LOADS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	34.2%		4,430	ORGANIC	29.4%		3,811
Uncoated Corrugated Cardboard	13.9%	5.3%	1,794	Food	21.0%	14.9%	2,713
Waxed Corrugated Cardboard	2.1%	3.5%	274	Leaves and Grass	0.0%	0.0%	0
Paper Bags	4.2%	3.8%	540	Prunings and Trimmings	0.0%	0.0%	0
Newspaper	1.1%	1.0%	143	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	1.9%	1.5%	245	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.1%	0.0%	7	Manures	0.0%	0.0%	0
Computer Paper	0.1%	0.2%	18	Textiles	5.4%	6.3%	698
Other Office Paper	0.3%	0.3%	35	Diapers	0.0%	0.0%	2
Magazines and Catalogs	2.5%	1.7%	327	Remainder/Composite Organic	3.1%	3.3%	398
Phone Books and Directories	0.2%	0.4%	29	CONSTRUCTION & DEMOLITION	15.1%		1,953
Other Miscellaneous Paper	3.3%	1.1%	429	Concrete	0.0%	0.0%	0
Remainder/Composite Paper	4.5%	3.4%	589	Asphalt Paving	0.0%	0.0%	0
GLASS	2.6%		331	Asphalt Roofing	0.3%	0.0%	43
CRV Clear Bottles	0.9%	0.9%	121	Non-Treated Lumber	14.2%	15.3%	1,843
Non-CRV Clear Bottles and Containers	1.4%	1.4%	185	Treated Lumber	0.4%	0.7%	57
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	4
Non-CRV Brown Bottles and Containers	0.2%	0.2%	25	Rock, Soil and Fines	0.0%	0.0%	0
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	1
Flat Glass	0.0%	0.0%	1	Remainder/Composite Construction and Demolition	0.0%	0.0%	5
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.1%		12
METAL	5.2%		668	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.2%	0.1%	32	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.6%	0.9%	72	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	1.9%	1.7%	251	Batteries	0.1%	0.2%	12
CRV Aluminum Cans	0.6%	0.4%	79	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	8.0%		1,035
Other Non-Ferrous Metal	0.5%	0.6%	63	Ash	0.0%	0.0%	0
Remainder/Composite Metal	1.3%	2.0%	172	Sewage Solids	0.0%	0.0%	0
PLASTIC	5.1%		664	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.8%	0.6%	102	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	3	Bulky Items	8.0%	5.3%	1,035
CRV PETE Containers	0.1%	0.1%	8	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.1%	0.1%	11	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.1%	0.1%	14	MIXED RESIDUE	0.3%		42
Film Plastic	2.3%	0.8%	298	Mixed Residue	0.3%	0.3%	42
Durable Plastic Items	0.8%	0.4%	102	Total Percent	100.0%		
Remainder/Composite Plastic	1.0%	1.2%	127				
Sample Count	6		Total 1999 Tons				12,945

TABLE 63: COMPOSITION OF DISPOSED MILITARY C&D WASTE GENERATED IN-CITY – 2-AXLE TRUCKS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	1.1%		54	ORGANIC	7.9%		379
Uncoated Corrugated Cardboard	1.1%	2.5%	54	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0	Branches and Stumps	7.9%	0.0%	379
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	88.9%		4,248
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	0.0%	0.0%	0
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	0.0%	0.0%	0
GLASS	0.0%		0	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	1.4%	3.0%	65
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	1.0%	2.3%	50
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	67.1%	37.6%	3,209
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	18.6%	29.9%	887
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.8%	1.7%	37
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	2.0%		97	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	2.0%	4.5%	97	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.0%		0
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.0%		0	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	0	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	0				
Remainder/Composite Plastic	0.0%	0.0%	0	Total Percent	100.0%		
Sample Count	6			Total 1999 Tons			4,779

TABLE 64: COMPOSITION OF DISPOSED MILITARY C&D WASTE GENERATED IN-CITY – 3-AXLE TRUCKS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.0%		0	ORGANIC	0.0%		0
Uncoated Corrugated Cardboard	0.0%	0.0%	0	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	96.9%		6,621
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	0.0%	0.0%	0
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	0.0%	0.0%	0
GLASS	0.0%		0	Asphalt Roofing	20.1%	30.9%	1,377
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	2.1%	2.2%	141
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	1.0%	1.1%	66
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	12.0%	12.4%	823
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	20.5%	31.2%	1,398
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	41.0%	36.7%	2,802
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.1%	0.2%	8
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.1%	0.2%	6
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	1.1%		77	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	1.1%	1.4%	77	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	2.0%		137
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.0%		0	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	2.0%	3.7%	137
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	0	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	0				
Remainder/Composite Plastic	0.0%	0.0%	0	Total Percent	100.0%		
Sample Count	8			Total 1999 Tons			6,835

TABLE 65: COMPOSITION OF DISPOSED MILITARY C&D WASTE GENERATED IN-CITY – SEMI TRUCKS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.0%		0	ORGANIC	1.2%		571
Uncoated Corrugated Cardboard	0.0%	0.0%	0	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	0.2%	0.2%	73
Newspaper	0.0%	0.0%	0	Branches and Stumps	1.0%	1.0%	498
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	93.2%		44,615
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	4.9%	2.3%	2,366
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	0.0%	0.0%	0
GLASS	0.0%		0	Asphalt Roofing	0.4%	0.7%	197
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	3.6%	2.8%	1,717
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	30.8%	8.6%	14,736
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.5%	0.4%	225
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	48.9%	9.3%	23,427
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.2%	0.2%	88
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	3.9%	1.3%	1,859
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	5.1%		2,429	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	5.1%	2.1%	2,429	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.4%		183
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.2%		92	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.4%	0.3%	183
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	17	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.1%	0.1%	39	Total Percent	100.0%		
Remainder/Composite Plastic	0.1%	0.1%	36				
Sample Count	45		Total 1999 Tons				47,890

TABLE 66: COMPOSITION OF DISPOSED MILITARY C&D WASTE GENERATED IN-CITY – DRAG-ON LOADS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.8%		55	ORGANIC	5.5%		378
Uncoated Corrugated Cardboard	0.5%	0.8%	32	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.5%	0.5%	31
Paper Bags	0.2%	0.3%	17	Prunings and Trimmings	3.8%	6.3%	265
Newspaper	0.0%	0.0%	0	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	1.2%	1.5%	82
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	90.7%		6,244
Other Miscellaneous Paper	0.1%	0.1%	6	Concrete	11.5%	6.5%	791
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	1.5%	2.4%	102
GLASS	0.0%		0	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.8%	1.4%	58
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	21.3%	12.7%	1,468
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	8.9%	8.8%	615
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	32.6%	16.9%	2,242
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.3%	0.5%	20
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	13.8%	8.7%	947
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	2.5%		175	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	2.0%	1.7%	140	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.3%		20
Other Non-Ferrous Metal	0.5%	0.9%	36	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.2%		14	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	2	Bulky Items	0.3%	0.3%	20
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.1%	0.2%	10	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.1%	2	Total Percent	100.0%		
Remainder/Composite Plastic	0.0%	0.0%	0				
Sample Count	13		Total 1999 Tons				6,885

TABLE 67: COMPOSITION OF DISPOSED MILITARY C&D WASTE GENERATED OUT-OF-CITY – SEMI TRUCKS

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	0.0%		0	ORGANIC	3.3%		279
Uncoated Corrugated Cardboard	0.0%	0.0%	0	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	1.0%	1.0%	86
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	2.0%	3.8%	170
Newspaper	0.0%	0.0%	0	Branches and Stumps	0.3%	0.5%	22
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	96.7%		8,252
Other Miscellaneous Paper	0.0%	0.0%	0	Concrete	15.4%	9.0%	1,314
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	11.4%	12.8%	976
GLASS	0.0%		0	Asphalt Roofing	0.0%	0.0%	0
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.0%	0.0%	0
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	0.0%	0.0%	0
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	69.9%	21.2%	5,962
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%	0
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	0.0%		0	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.0%	0.0%	0	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.0%		0
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	0.0%		3	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	0.0%	0.0%	0	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	3				
Remainder/Composite Plastic	0.0%	0.0%	0	Total Percent	100.0%		
Sample Count	7		Total 1999 Tons				8,533

TABLE 68: COMPOSITION OF DISPOSED MILITARY C&D WASTE GENERATED OUT-OF-CITY – ALL OTHER VEHICLES

<i>Calculated at 90% confidence interval</i>							
	Percent	+ / -	Tons		Percent	+ / -	Tons
PAPER	22.6%		1,629	ORGANIC	0.0%		0
Uncoated Corrugated Cardboard	21.7%	0.0%	1,558	Food	0.0%	0.0%	0
Waxed Corrugated Cardboard	0.0%	0.0%	0	Leaves and Grass	0.0%	0.0%	0
Paper Bags	0.0%	0.0%	0	Prunings and Trimmings	0.0%	0.0%	0
Newspaper	0.0%	0.0%	0	Branches and Stumps	0.0%	0.0%	0
White Ledger Paper	0.0%	0.0%	0	Agricultural Crop Residues	0.0%	0.0%	0
Colored Ledger Paper	0.0%	0.0%	0	Manures	0.0%	0.0%	0
Computer Paper	0.0%	0.0%	0	Textiles	0.0%	0.0%	0
Other Office Paper	0.0%	0.0%	0	Diapers	0.0%	0.0%	0
Magazines and Catalogs	0.0%	0.0%	0	Remainder/Composite Organic	0.0%	0.0%	0
Phone Books and Directories	0.0%	0.0%	0	CONSTRUCTION & DEMOLITION	76.2%		5,483
Other Miscellaneous Paper	1.0%	0.0%	71	Concrete	2.3%	2.8%	162
Remainder/Composite Paper	0.0%	0.0%	0	Asphalt Paving	0.0%	0.0%	0
GLASS	0.0%		0	Asphalt Roofing	0.2%	0.2%	12
CRV Clear Bottles	0.0%	0.0%	0	Non-Treated Lumber	0.0%	0.0%	0
Non-CRV Clear Bottles and Containers	0.0%	0.0%	0	Treated Lumber	14.9%	0.0%	1,075
CRV Brown Bottles	0.0%	0.0%	0	Gypsum Board	0.0%	0.0%	0
Non-CRV Brown Bottles and Containers	0.0%	0.0%	0	Rock, Soil and Fines	1.7%	3.2%	123
CRV Other Colored Bottles	0.0%	0.0%	0	Contaminated soil, street sweepings, drain cleanings	55.2%	0.0%	3,970
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	0	Carpet & Carpet Padding	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Remainder/Composite Construction and Demolition	2.0%	0.1%	140
Remainder/Composite Glass	0.0%	0.0%	0	HOUSEHOLD HAZARDOUS	0.0%		0
METAL	0.0%		0	Paint	0.0%	0.0%	0
Tin/Steel Cans	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Major Appliances	0.0%	0.0%	0	Used Oil	0.0%	0.0%	0
Other Ferrous Metal	0.0%	0.0%	0	Batteries	0.0%	0.0%	0
CRV Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Hazardous	0.0%	0.0%	0
Non-CRV Aluminum Cans	0.0%	0.0%	0	SPECIAL WASTES	0.0%		0
Other Non-Ferrous Metal	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Remainder/Composite Metal	0.0%	0.0%	0	Sewage Solids	0.0%	0.0%	0
PLASTIC	1.2%		83	Industrial Sludge	0.0%	0.0%	0
CRV HDPE Containers	0.0%	0.0%	0	Treated Medical Waste	0.0%	0.0%	0
Non-CRV HDPE Containers	0.0%	0.0%	0	Bulky Items	0.0%	0.0%	0
CRV PETE Containers	0.0%	0.0%	0	Tires	0.0%	0.0%	0
Non-CRV PETE Containers	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	0
Miscellaneous Plastic Containers	0.0%	0.0%	0	MIXED RESIDUE	0.0%		0
Film Plastic	1.2%	0.0%	83	Mixed Residue	0.0%	0.0%	0
Durable Plastic Items	0.0%	0.0%	0	Total Percent	100.0%		
Remainder/Composite Plastic	0.0%	0.0%	0				
Sample Count	4		Total 1999 Tons				7,195

COMPOSITION OF DISPOSED MILITARY WASTE BY FACILITY OF ORIGIN

All samples of military C&D waste were correlated with their facilities of origin, and rough composition profiles were developed for each facility. It is important to note that the numbers of samples obtained from several of the facilities were extremely small. Therefore, the calculated composition findings must be regarded as imprecise. This uncertainty is reflected in the estimated margins of error for the composition percents in the following tables.

When only one sample was received from a particular facility, no margins of error could be calculated. The composition percents shown for those cases reflect the composition of the single load that was sampled.

TABLE 69: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – FASW

<i>Calculated at 90% confidence interval</i>		Percent		Percent
PAPER		0.0%	ORGANIC	0.0%
Uncoated Corrugated Cardboard		0.0%	Food	0.0%
Waxed Corrugated Cardboard		0.0%	Leaves and Grass	0.0%
Paper Bags		0.0%	Prunings and Trimmings	0.0%
Newspaper		0.0%	Branches and Stumps	0.0%
White Ledger Paper		0.0%	Agricultural Crop Residues	0.0%
Colored Ledger Paper		0.0%	Manures	0.0%
Computer Paper		0.0%	Textiles	0.0%
Other Office Paper		0.0%	Diapers	0.0%
Magazines and Catalogs		0.0%	Remainder/Composite Organic	0.0%
Phone Books and Directories		0.0%	CONSTRUCTION & DEMOLITION	100.0%
Other Miscellaneous Paper		0.0%	Concrete	0.0%
Remainder/Composite Paper		0.0%	Asphalt Paving	0.0%
GLASS		0.0%	Asphalt Roofing	0.0%
CRV Clear Bottles		0.0%	Non-Treated Lumber	0.0%
Non-CRV Clear Bottles and Containers		0.0%	Treated Lumber	0.0%
CRV Brown Bottles		0.0%	Gypsum Board	0.0%
Non-CRV Brown Bottles and Containers		0.0%	Rock, Soil and Fines	0.0%
CRV Other Colored Bottles		0.0%	Contaminated soil, street sweepings, drain cleanings	100.0%
Non-CRV & Other Colored Bottles and Containers		0.0%	Carpet & Carpet Padding	0.0%
Flat Glass		0.0%	Remainder/Composite Construction and Demolition	0.0%
Remainder/Composite Glass		0.0%	HOUSEHOLD HAZARDOUS	0.0%
METAL		0.0%	Paint	0.0%
Tin/Steel Cans		0.0%	Vehicle and Equipment Fluids	0.0%
Major Appliances		0.0%	Used Oil	0.0%
Other Ferrous Metal		0.0%	Batteries	0.0%
CRV Aluminum Cans		0.0%	Remainder/Composite Household Hazardous	0.0%
Non-CRV Aluminum Cans		0.0%	SPECIAL WASTES	0.0%
Other Non-Ferrous Metal		0.0%	Ash	0.0%
Remainder/Composite Metal		0.0%	Sewage Solids	0.0%
PLASTIC		0.0%	Industrial Sludge	0.0%
CRV HDPE Containers		0.0%	Treated Medical Waste	0.0%
Non-CRV HDPE Containers		0.0%	Bulky Items	0.0%
CRV PETE Containers		0.0%	Tires	0.0%
Non-CRV PETE Containers		0.0%	Remainder/Composite Special Waste	0.0%
Miscellaneous Plastic Containers		0.0%	MIXED RESIDUE	0.0%
Film Plastic		0.0%	Mixed Residue	0.0%
Durable Plastic Items		0.0%		
Remainder/Composite Plastic		0.0%	Total Percent	100.0%
Sample Count		1		

TABLE 70: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – LA MESA NH

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	0.0%		ORGANIC	2.3%	
Uncoated Corrugated Cardboard	0.0%	0.0%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	2.3%	0.9%
Paper Bags	0.0%	0.0%	Prunings and Trimmings	0.0%	0.0%
Newspaper	0.0%	0.0%	Branches and Stumps	0.0%	0.0%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	97.7%	
Other Miscellaneous Paper	0.0%	0.0%	Concrete	23.3%	18.0%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	2.2%	3.5%
GLASS	0.0%		Asphalt Roofing	0.8%	1.6%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	0.0%	0.0%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	0.0%	0.0%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	0.0%	0.0%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	70.9%	19.3%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	0.0%	0.0%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	0.4%	0.8%
Remainer/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	0.0%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	0.0%	0.0%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	0.0%	
Other Non-Ferrous Metal	0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.1%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	0.0%	0.0%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.0%	0.0%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.1%	0.1%			
Remainder/Composite Plastic	0.0%	0.0%	Total Percent	100.0%	
Sample Count	4				

TABLE 71: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – LAKESIDE NH

<i>Calculated at 90% confidence interval</i>		Percent		Percent
PAPER		0.0%	ORGANIC	0.0%
Uncoated Corrugated Cardboard		0.0%	Food	0.0%
Waxed Corrugated Cardboard		0.0%	Leaves and Grass	0.0%
Paper Bags		0.0%	Prunings and Trimmings	0.0%
Newspaper		0.0%	Branches and Stumps	0.0%
White Ledger Paper		0.0%	Agricultural Crop Residues	0.0%
Colored Ledger Paper		0.0%	Manures	0.0%
Computer Paper		0.0%	Textiles	0.0%
Other Office Paper		0.0%	Diapers	0.0%
Magazines and Catalogs		0.0%	Remainder/Composite Organic	0.0%
Phone Books and Directories		0.0%	CONSTRUCTION & DEMOLITION	100.0%
Other Miscellaneous Paper		0.0%	Concrete	6.5%
Remainder/Composite Paper		0.0%	Asphalt Paving	0.0%
GLASS		0.0%	Asphalt Roofing	0.0%
CRV Clear Bottles		0.0%	Non-Treated Lumber	0.0%
Non-CRV Clear Bottles and Containers		0.0%	Treated Lumber	0.0%
CRV Brown Bottles		0.0%	Gypsum Board	0.0%
Non-CRV Brown Bottles and Containers		0.0%	Rock, Soil and Fines	93.5%
CRV Other Colored Bottles		0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%
Non-CRV & Other Colored Bottles and Containers		0.0%	Carpet & Carpet Padding	0.0%
Flat Glass		0.0%	Remainder/Composite Construction and Demolition	0.0%
Remainder/Composite Glass		0.0%	HOUSEHOLD HAZARDOUS	0.0%
METAL		0.0%	Paint	0.0%
Tin/Steel Cans		0.0%	Vehicle and Equipment Fluids	0.0%
Major Appliances		0.0%	Used Oil	0.0%
Other Ferrous Metal		0.0%	Batteries	0.0%
CRV Aluminum Cans		0.0%	Remainder/Composite Household Hazardous	0.0%
Non-CRV Aluminum Cans		0.0%	SPECIAL WASTES	0.0%
Other Non-Ferrous Metal		0.0%	Ash	0.0%
Remainder/Composite Metal		0.0%	Sewage Solids	0.0%
PLASTIC		0.0%	Industrial Sludge	0.0%
CRV HDPE Containers		0.0%	Treated Medical Waste	0.0%
Non-CRV HDPE Containers		0.0%	Bulky Items	0.0%
CRV PETE Containers		0.0%	Tires	0.0%
Non-CRV PETE Containers		0.0%	Remainder/Composite Special Waste	0.0%
Miscellaneous Plastic Containers		0.0%	MIXED RESIDUE	0.0%
Film Plastic		0.0%	Mixed Residue	0.0%
Durable Plastic Items		0.0%		
Remainder/Composite Plastic		0.0%	Total Percent	100.0%
Sample Count		1		

TABLE 72: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – MCAS

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	0.5%		ORGANIC	0.0%	
Uncoated Corrugated Cardboard	0.4%	0.6%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	0.0%	0.0%
Paper Bags	0.1%	0.2%	Prunings and Trimmings	0.0%	0.0%
Newspaper	0.0%	0.0%	Branches and Stumps	0.0%	0.0%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	97.4%	
Other Miscellaneous Paper	0.0%	0.0%	Concrete	0.9%	1.5%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	0.0%	0.0%
GLASS	0.0%		Asphalt Roofing	0.0%	0.0%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	1.3%	1.2%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	2.7%	3.0%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	8.0%	7.0%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	81.6%	14.3%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	0.1%	0.1%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	2.9%	4.3%
Remainder/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	0.9%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	0.9%	0.9%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	1.1%	
Other Non-Ferrous Metal	0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.1%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	1.1%	2.0%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.1%	0.1%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.0%	0.0%			
Remainder/Composite Plastic	0.0%	0.0%	Total Percent	100.0%	
Sample Count	14				

TABLE 73: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – MCRD

<i>Calculated at 90% confidence interval</i>		Percent		Percent
PAPER		0.0%	ORGANIC	0.0%
Uncoated Corrugated Cardboard		0.0%	Food	0.0%
Waxed Corrugated Cardboard		0.0%	Leaves and Grass	0.0%
Paper Bags		0.0%	Prunings and Trimmings	0.0%
Newspaper		0.0%	Branches and Stumps	0.0%
White Ledger Paper		0.0%	Agricultural Crop Residues	0.0%
Colored Ledger Paper		0.0%	Manures	0.0%
Computer Paper		0.0%	Textiles	0.0%
Other Office Paper		0.0%	Diapers	0.0%
Magazines and Catalogs		0.0%	Remainder/Composite Organic	0.0%
Phone Books and Directories		0.0%	CONSTRUCTION & DEMOLITION	99.8%
Other Miscellaneous Paper		0.0%	Concrete	31.6%
Remainder/Composite Paper		0.0%	Asphalt Paving	0.0%
GLASS		0.0%	Asphalt Roofing	0.0%
CRV Clear Bottles		0.0%	Non-Treated Lumber	0.0%
Non-CRV Clear Bottles and Containers		0.0%	Treated Lumber	0.0%
CRV Brown Bottles		0.0%	Gypsum Board	0.0%
Non-CRV Brown Bottles and Containers		0.0%	Rock, Soil and Fines	50.9%
CRV Other Colored Bottles		0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%
Non-CRV & Other Colored Bottles and Containers		0.0%	Carpet & Carpet Padding	0.0%
Flat Glass		0.0%	Remainder/Composite Construction and Demolition	17.2%
Remainder/Composite Glass		0.0%	HOUSEHOLD HAZARDOUS	0.0%
METAL		0.0%	Paint	0.0%
Tin/Steel Cans		0.0%	Vehicle and Equipment Fluids	0.0%
Major Appliances		0.0%	Used Oil	0.0%
Other Ferrous Metal		0.0%	Batteries	0.0%
CRV Aluminum Cans		0.0%	Remainder/Composite Household Hazardous	0.0%
Non-CRV Aluminum Cans		0.0%	SPECIAL WASTES	0.0%
Other Non-Ferrous Metal		0.0%	Ash	0.0%
Remainder/Composite Metal		0.0%	Sewage Solids	0.0%
PLASTIC		0.2%	Industrial Sludge	0.0%
CRV HDPE Containers		0.0%	Treated Medical Waste	0.0%
Non-CRV HDPE Containers		0.2%	Bulky Items	0.0%
CRV PETE Containers		0.0%	Tires	0.0%
Non-CRV PETE Containers		0.0%	Remainder/Composite Special Waste	0.0%
Miscellaneous Plastic Containers		0.0%	MIXED RESIDUE	0.0%
Film Plastic		0.0%	Mixed Residue	0.0%
Durable Plastic Items		0.0%		
Remainder/Composite Plastic		0.0%	Total Percent	100.0%
Sample Count		1		

TABLE 74: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – NAB CORONADO

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	2.6%		ORGANIC	0.0%	
Uncoated Corrugated Cardboard	2.5%	7.8%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	0.0%	0.0%
Paper Bags	0.0%	0.0%	Prunings and Trimmings	0.0%	0.0%
Newspaper	0.0%	0.0%	Branches and Stumps	0.0%	0.0%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	97.3%	
Other Miscellaneous Paper	0.1%	0.4%	Concrete	0.0%	0.0%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	0.0%	0.0%
GLASS	0.0%		Asphalt Roofing	0.0%	0.0%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	0.0%	0.0%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	1.7%	5.4%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	0.0%	0.0%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	0.0%	0.0%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	95.3%	14.7%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	0.0%	0.0%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	0.2%	0.7%
Remainer/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	0.0%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	0.0%	0.0%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	0.0%	
Other Non-Ferrous Metal	0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.1%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	0.0%	0.0%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.1%	0.4%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.0%	0.0%			
Remainder/Composite Plastic	0.0%	0.0%	Total Percent	100.0%	
Sample Count	2				

TABLE 75: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – NASNI CORONADO

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	0.0%		ORGANIC	0.0%	
Uncoated Corrugated Cardboard	0.0%	0.0%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	0.0%	0.0%
Paper Bags	0.0%	0.0%	Prunings and Trimmings	0.0%	0.0%
Newspaper	0.0%	0.0%	Branches and Stumps	0.0%	0.0%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	100.0%	
Other Miscellaneous Paper	0.0%	0.0%	Concrete	16.9%	17.3%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	17.8%	22.3%
GLASS	0.0%		Asphalt Roofing	0.0%	0.0%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	0.0%	0.0%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	0.0%	0.0%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	0.0%	0.0%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	65.2%	39.3%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	0.0%	0.0%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	0.0%	0.0%
Remainder/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	0.0%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	0.0%	0.0%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	0.0%	
Other Non-Ferrous Metal	0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.0%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	0.0%	0.0%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.0%	0.0%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.0%	0.0%			
Remainder/Composite Plastic	0.0%	0.0%	Total Percent	100.0%	
Sample Count	3				

TABLE 76: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – NAVSTA

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	0.0%		ORGANIC	5.9%	
Uncoated Corrugated Cardboard	0.0%	0.0%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	0.0%	0.0%
Paper Bags	0.0%	0.0%	Prunings and Trimmings	0.0%	0.0%
Newspaper	0.0%	0.0%	Branches and Stumps	5.9%	10.7%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	93.3%	
Other Miscellaneous Paper	0.0%	0.0%	Concrete	5.5%	10.0%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	0.0%	0.0%
GLASS	0.0%		Asphalt Roofing	0.0%	0.0%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	0.0%	0.0%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	6.9%	14.3%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	0.0%	0.0%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	80.9%	26.9%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	0.0%	0.0%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	0.0%	0.0%
Remainder/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	0.7%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	0.7%	1.5%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	0.0%	
Other Non-Ferrous Metal	0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.1%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	0.0%	0.0%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.0%	0.0%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.1%	0.2%			
Remainder/Composite Plastic	0.0%	0.0%	Total Percent	100.0%	
Sample Count	4				

TABLE 77: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – NAVY HOSPITAL

<i>Calculated at 90% confidence interval</i>			Percent	+ / -		Percent	+ / -
PAPER			0.0%		ORGANIC	2.6%	
Uncoated Corrugated Cardboard			0.0%	0.0%	Food	0.0%	0.0%
Waxed Corrugated Cardboard			0.0%	0.0%	Leaves and Grass	2.6%	0.0%
Paper Bags			0.0%	0.0%	Prunings and Trimmings	0.0%	0.0%
Newspaper			0.0%	0.0%	Branches and Stumps	0.0%	0.0%
White Ledger Paper			0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper			0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper			0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper			0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs			0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories			0.0%	0.0%	CONSTRUCTION & DEMOLITION	97.4%	
Other Miscellaneous Paper			0.0%	0.0%	Concrete	0.0%	0.0%
Remainder/Composite Paper			0.0%	0.0%	Asphalt Paving	0.0%	0.0%
GLASS			0.0%		Asphalt Roofing	0.0%	0.0%
CRV Clear Bottles			0.0%	0.0%	Non-Treated Lumber	0.0%	0.0%
Non-CRV Clear Bottles and Containers			0.0%	0.0%	Treated Lumber	0.0%	0.0%
CRV Brown Bottles			0.0%	0.0%	Gypsum Board	0.0%	0.0%
Non-CRV Brown Bottles and Containers			0.0%	0.0%	Rock, Soil and Fines	97.4%	0.0%
CRV Other Colored Bottles			0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers			0.0%	0.0%	Carpet & Carpet Padding	0.0%	0.0%
Flat Glass			0.0%	0.0%	Remainder/Composite Construction and Demolition	0.0%	0.0%
Remainder/Composite Glass			0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL			0.0%		Paint	0.0%	0.0%
Tin/Steel Cans			0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances			0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal			0.0%	0.0%	Batteries	0.0%	0.0%
CRV Aluminum Cans			0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans			0.0%	0.0%	SPECIAL WASTES	0.0%	
Other Non-Ferrous Metal			0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal			0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC			0.0%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers			0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers			0.0%	0.0%	Bulky Items	0.0%	0.0%
CRV PETE Containers			0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers			0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers			0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic			0.0%	0.0%	Mixed Residue	0.0%	0.0%
Durable Plastic Items			0.0%	0.0%			
Remainder/Composite Plastic			0.0%	0.0%	Total Percent	100.0%	
Sample Count			2				

TABLE 78: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – NRAD

<i>Calculated at 90% confidence interval</i>		Percent		Percent
PAPER		0.0%	ORGANIC	22.0%
Uncoated Corrugated Cardboard		0.0%	Food	0.0%
Waxed Corrugated Cardboard		0.0%	Leaves and Grass	0.0%
Paper Bags		0.0%	Prunings and Trimmings	0.0%
Newspaper		0.0%	Branches and Stumps	0.0%
White Ledger Paper		0.0%	Agricultural Crop Residues	0.0%
Colored Ledger Paper		0.0%	Manures	0.0%
Computer Paper		0.0%	Textiles	22.0%
Other Office Paper		0.0%	Diapers	0.0%
Magazines and Catalogs		0.0%	Remainder/Composite Organic	0.0%
Phone Books and Directories		0.0%	CONSTRUCTION & DEMOLITION	78.0%
Other Miscellaneous Paper		0.0%	Concrete	0.0%
Remainder/Composite Paper		0.0%	Asphalt Paving	0.0%
GLASS		0.0%	Asphalt Roofing	0.0%
CRV Clear Bottles		0.0%	Non-Treated Lumber	0.0%
Non-CRV Clear Bottles and Containers		0.0%	Treated Lumber	0.0%
CRV Brown Bottles		0.0%	Gypsum Board	0.0%
Non-CRV Brown Bottles and Containers		0.0%	Rock, Soil and Fines	0.0%
CRV Other Colored Bottles		0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%
Non-CRV & Other Colored Bottles and Containers		0.0%	Carpet & Carpet Padding	0.0%
Flat Glass		0.0%	Remainder/Composite Construction and Demolition	78.0%
Remainer/Composite Glass		0.0%	HOUSEHOLD HAZARDOUS	0.0%
METAL		0.0%	Paint	0.0%
Tin/Steel Cans		0.0%	Vehicle and Equipment Fluids	0.0%
Major Appliances		0.0%	Used Oil	0.0%
Other Ferrous Metal		0.0%	Batteries	0.0%
CRV Aluminum Cans		0.0%	Remainder/Composite Household Hazardous	0.0%
Non-CRV Aluminum Cans		0.0%	SPECIAL WASTES	0.0%
Other Non-Ferrous Metal		0.0%	Ash	0.0%
Remainder/Composite Metal		0.0%	Sewage Solids	0.0%
PLASTIC		0.0%	Industrial Sludge	0.0%
CRV HDPE Containers		0.0%	Treated Medical Waste	0.0%
Non-CRV HDPE Containers		0.0%	Bulky Items	0.0%
CRV PETE Containers		0.0%	Tires	0.0%
Non-CRV PETE Containers		0.0%	Remainder/Composite Special Waste	0.0%
Miscellaneous Plastic Containers		0.0%	MIXED RESIDUE	0.0%
Film Plastic		0.0%	Mixed Residue	0.0%
Durable Plastic Items		0.0%		
Remainder/Composite Plastic		0.0%	Total Percent	100.0%
Sample Count		1		

TABLE 79: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – NTC

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	0.0%		ORGANIC	0.8%	
Uncoated Corrugated Cardboard	0.0%	0.0%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	0.0%	0.0%
Paper Bags	0.0%	0.0%	Prunings and Trimmings	0.2%	0.3%
Newspaper	0.0%	0.0%	Branches and Stumps	0.6%	0.6%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	92.3%	
Other Miscellaneous Paper	0.0%	0.0%	Concrete	5.9%	2.6%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	0.0%	0.0%
GLASS	0.0%		Asphalt Roofing	2.9%	4.0%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	4.3%	3.3%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	37.8%	9.5%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	0.6%	0.5%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	36.1%	8.9%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	0.2%	0.3%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	4.6%	1.5%
Remainer/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	6.2%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	6.2%	2.3%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	0.5%	
Other Non-Ferrous Metal	0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.2%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	0.5%	0.3%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.0%	0.0%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.1%	0.1%			
Remainder/Composite Plastic	0.1%	0.1%	Total Percent	100.0%	
Sample Count	39				

TABLE 80: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – OLF IMPERIAL BEACH

<i>Calculated at 90% confidence interval</i>		Percent		Percent
PAPER		0.0%	ORGANIC	100.0%
Uncoated Corrugated Cardboard		0.0%	Food	0.0%
Waxed Corrugated Cardboard		0.0%	Leaves and Grass	0.0%
Paper Bags		0.0%	Prunings and Trimmings	88.4%
Newspaper		0.0%	Branches and Stumps	11.6%
White Ledger Paper		0.0%	Agricultural Crop Residues	0.0%
Colored Ledger Paper		0.0%	Manures	0.0%
Computer Paper		0.0%	Textiles	0.0%
Other Office Paper		0.0%	Diapers	0.0%
Magazines and Catalogs		0.0%	Remainder/Composite Organic	0.0%
Phone Books and Directories		0.0%	CONSTRUCTION & DEMOLITION	0.0%
Other Miscellaneous Paper		0.0%	Concrete	0.0%
Remainder/Composite Paper		0.0%	Asphalt Paving	0.0%
GLASS		0.0%	Asphalt Roofing	0.0%
CRV Clear Bottles		0.0%	Non-Treated Lumber	0.0%
Non-CRV Clear Bottles and Containers		0.0%	Treated Lumber	0.0%
CRV Brown Bottles		0.0%	Gypsum Board	0.0%
Non-CRV Brown Bottles and Containers		0.0%	Rock, Soil and Fines	0.0%
CRV Other Colored Bottles		0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%
Non-CRV & Other Colored Bottles and Containers		0.0%	Carpet & Carpet Padding	0.0%
Flat Glass		0.0%	Remainder/Composite Construction and Demolition	0.0%
Remainer/Composite Glass		0.0%	HOUSEHOLD HAZARDOUS	0.0%
METAL		0.0%	Paint	0.0%
Tin/Steel Cans		0.0%	Vehicle and Equipment Fluids	0.0%
Major Appliances		0.0%	Used Oil	0.0%
Other Ferrous Metal		0.0%	Batteries	0.0%
CRV Aluminum Cans		0.0%	Remainder/Composite Household Hazardous	0.0%
Non-CRV Aluminum Cans		0.0%	SPECIAL WASTES	0.0%
Other Non-Ferrous Metal		0.0%	Ash	0.0%
Remainder/Composite Metal		0.0%	Sewage Solids	0.0%
PLASTIC		0.0%	Industrial Sludge	0.0%
CRV HDPE Containers		0.0%	Treated Medical Waste	0.0%
Non-CRV HDPE Containers		0.0%	Bulky Items	0.0%
CRV PETE Containers		0.0%	Tires	0.0%
Non-CRV PETE Containers		0.0%	Remainder/Composite Special Waste	0.0%
Miscellaneous Plastic Containers		0.0%	MIXED RESIDUE	0.0%
Film Plastic		0.0%	Mixed Residue	0.0%
Durable Plastic Items		0.0%		
Remainder/Composite Plastic		0.0%	Total Percent	100.0%
Sample Count		1		

TABLE 81: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – SAN DIEGO NH

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	0.5%		ORGANIC	0.4%	
Uncoated Corrugated Cardboard	0.0%	0.0%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	0.0%	0.0%
Paper Bags	0.2%	0.4%	Prunings and Trimmings	0.4%	0.6%
Newspaper	0.0%	0.0%	Branches and Stumps	0.0%	0.0%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	97.0%	
Other Miscellaneous Paper	0.2%	0.4%	Concrete	6.7%	10.6%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	4.2%	6.5%
GLASS	0.0%		Asphalt Roofing	0.0%	0.0%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	2.4%	4.0%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	7.4%	11.0%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	20.3%	22.7%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	43.6%	38.5%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	9.0%	11.6%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	0.0%	0.0%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	3.4%	3.7%
Remainder/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	1.5%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	1.5%	2.4%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	0.5%	
Other Non-Ferrous Metal	0.0%	0.0%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.1%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	0.5%	0.8%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.1%	0.2%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.0%	0.0%			
Remainder/Composite Plastic	0.0%	0.0%	Total Percent	100.0%	
Sample Count	7				

TABLE 82: COMPOSITION OF DISPOSED MILITARY C&D WASTE FROM SPECIFIC FACILITIES – SUB BASE

<i>Calculated at 90% confidence interval</i>					
	Percent	+ / -		Percent	+ / -
PAPER	0.0%		ORGANIC	52.8%	
Uncoated Corrugated Cardboard	0.0%	0.0%	Food	0.0%	0.0%
Waxed Corrugated Cardboard	0.0%	0.0%	Leaves and Grass	0.0%	0.0%
Paper Bags	0.0%	0.0%	Prunings and Trimmings	32.4%	51.7%
Newspaper	0.0%	0.0%	Branches and Stumps	20.5%	40.2%
White Ledger Paper	0.0%	0.0%	Agricultural Crop Residues	0.0%	0.0%
Colored Ledger Paper	0.0%	0.0%	Manures	0.0%	0.0%
Computer Paper	0.0%	0.0%	Textiles	0.0%	0.0%
Other Office Paper	0.0%	0.0%	Diapers	0.0%	0.0%
Magazines and Catalogs	0.0%	0.0%	Remainder/Composite Organic	0.0%	0.0%
Phone Books and Directories	0.0%	0.0%	CONSTRUCTION & DEMOLITION	41.4%	
Other Miscellaneous Paper	0.0%	0.0%	Concrete	0.0%	0.0%
Remainder/Composite Paper	0.0%	0.0%	Asphalt Paving	0.0%	0.0%
GLASS	0.0%		Asphalt Roofing	0.0%	0.0%
CRV Clear Bottles	0.0%	0.0%	Non-Treated Lumber	0.0%	0.0%
Non-CRV Clear Bottles and Containers	0.0%	0.0%	Treated Lumber	21.5%	22.9%
CRV Brown Bottles	0.0%	0.0%	Gypsum Board	0.0%	0.0%
Non-CRV Brown Bottles and Containers	0.0%	0.0%	Rock, Soil and Fines	0.0%	0.0%
CRV Other Colored Bottles	0.0%	0.0%	Contaminated soil, street sweepings, drain cleanings	0.0%	0.0%
Non-CRV & Other Colored Bottles and Containers	0.0%	0.0%	Carpet & Carpet Padding	2.6%	3.6%
Flat Glass	0.0%	0.0%	Remainder/Composite Construction and Demolition	17.4%	24.8%
Remainder/Composite Glass	0.0%	0.0%	HOUSEHOLD HAZARDOUS	0.0%	
METAL	4.5%		Paint	0.0%	0.0%
Tin/Steel Cans	0.0%	0.0%	Vehicle and Equipment Fluids	0.0%	0.0%
Major Appliances	0.0%	0.0%	Used Oil	0.0%	0.0%
Other Ferrous Metal	0.0%	0.0%	Batteries	0.0%	0.0%
CRV Aluminum Cans	0.0%	0.0%	Remainder/Composite Household Hazardous	0.0%	0.0%
Non-CRV Aluminum Cans	0.0%	0.0%	SPECIAL WASTES	1.0%	
Other Non-Ferrous Metal	4.5%	6.5%	Ash	0.0%	0.0%
Remainder/Composite Metal	0.0%	0.0%	Sewage Solids	0.0%	0.0%
PLASTIC	0.3%		Industrial Sludge	0.0%	0.0%
CRV HDPE Containers	0.0%	0.0%	Treated Medical Waste	0.0%	0.0%
Non-CRV HDPE Containers	0.0%	0.0%	Bulky Items	1.0%	1.5%
CRV PETE Containers	0.0%	0.0%	Tires	0.0%	0.0%
Non-CRV PETE Containers	0.0%	0.0%	Remainder/Composite Special Waste	0.0%	0.0%
Miscellaneous Plastic Containers	0.0%	0.0%	MIXED RESIDUE	0.0%	
Film Plastic	0.0%	0.0%	Mixed Residue	0.0%	0.0%
Durable Plastic Items	0.3%	0.4%			
Remainder/Composite Plastic	0.0%	0.0%	Total Percent	100.0%	
Sample Count	3				

APPENDIX D: SAMPLING METHODOLOGY

Cascadia Consulting Group served as the primary contractor for this study and was responsible for study design, project management, data analysis, and reporting. Sky Valley Associates captured and sorted samples of municipal solid waste (MSW), and Sheri Eiker-Wiles Associates performed visual composition estimates of waste generated by construction and demolition (C&D) activities.

ASSUMPTIONS MADE FOR THIS STUDY

Composition estimates were derived for various sectors of the waste stream by combining information from the sample records with information provided by the City regarding the tons of waste disposed by each sector during 1999. Several major assumptions were made when calculating the composition estimates.

- It was assumed that C&D waste disposed at other city landfills is identical in composition to C&D waste disposed at Miramar Landfill. Certain strata considered in this study reflected a combination of tonnage figures for Miramar Landfill as well as other facilities. However, the composition of C&D sectors was calculated based only on samples taken at Miramar Landfill. Composition of MSW sectors was based on loads originally destined for Miramar Landfill as well as loads diverted from other landfills to Miramar Landfill.
- Samples of military MSW that originated at Naval Air Station, North Island were assumed to reflect the composition of military MSW from other facilities for which sampling arrangements had not been made.
- All self-hauled MSW was assumed to have the composition of C&D loads from the same sector. Certain C&D waste strata considered in this study actually reflected a combination of MSW and C&D tonnage figures, but their composition was calculated based only on characterization of C&D samples.
- The number of single-family residences that received recycling service changed dramatically during the study period. For the purpose of this report, the final numbers were used for households that had recycling services. This decision was made in order to provide the most accurate estimates of current residential waste composition. Therefore, the composition estimates may not be representative of residential waste that was disposed during 1999, but they are expected to provide an accurate profile of waste disposed during 2000.

Appendix A describes the strata in detail and shows instances of MSW tonnage being combined with C&D tonnage, as well as instances of C&D sampling results at Miramar Landfill being projected onto C&D waste disposed at other landfills. As described above, MSW samples were diverted from other landfills to Miramar Landfill for the purpose of this study.

SOURCES OF DISPOSED WASTE

This study measured waste disposal, not waste generation. (Waste generation equals the sum of disposed and recycled amounts.) Waste samples were taken from loads destined for disposal at Miramar Landfill and did not include tonnage collected through recycling or yard waste composting programs. This study examined waste from five main sources, which are defined below.

- **Single-family residential** waste is generated by single-family residences. The largest portion of this waste is MSW that is collected at curbside by City-operated vehicles. However, a significant portion of this single-family residential waste is hauled by the residents themselves. For example, approximately 16% of single-family residential waste that is generated within the City of San Diego is hauled by the residents themselves. All single-family residential self-haul waste was classified as C&D waste for the purposes of this study.
- **Multifamily residential** waste is generated by multifamily residences (apartment buildings and condominiums). This waste is collected by franchised hauling companies.
- **Commercial** waste is generated at businesses and institutions. Most commercial waste is collected by franchised haulers, but some is taken to the landfill by the company that generated it (thus making it commercial self-haul waste). All commercial self-haul waste was classified as C&D for the purposes of this study.
- **Military** waste is generated at military facilities. The City distinguishes loads of military waste as being either MSW or C&D, depending on the composition of the loads as determined at the Miramar Landfill scale-house.
- **City department** waste is generated by City of San Diego departments. The MSW portion of city department waste is collected along with commercial MSW, which was sampled as part of this study. However, C&D waste represents the largest portion of city department waste, and samples of city department C&D were specifically analyzed for this study.

ALLOCATION OF SAMPLES

For both the MSW and the C&D waste streams, sampling was scheduled at Miramar Landfill for three seasons: autumn (September 1999), winter (late February and early March 1999), and spring (May 1999). Samples were distributed approximately evenly among the three sorting seasons. For MSW waste, a target number of samples was set for each generator type (i.e., single-family residential, multifamily residential, commercial, or military). For C&D waste, sample targets were set for each vehicle type, and the samples were later classified according to generator type (i.e., residential, commercial, military, or city-department C&D). The numbers of samples planned and obtained are summarized in Table 83.

TABLE 83: PLANNED VS. ACTUAL SAMPLE COUNTS

	North		Central		South		Totals	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
MSW								
Single-Family Residential	42	42	42	42	42	42	306	300
<i>With recycling</i>	21	21	21	21	21	21	63	63
<i>Without recycling</i>	21	21	21	21	21	21	63	63
<i>Additional "yardwaste" samples</i>							180	174
Multifamily Residential	18	18	18	18	18	18	54	54
Commercial							99	102
<i>Front loader, Side Loader, or Flipper</i>							33	36
<i>Open Drag-on</i>							33	33
<i>Compactor Drag-on</i>							33	33
Military							12	15
MSW Totals							471	471
C&D								
Pick-Up Truck or Car							119	237
Two-Axle Truck							256	296
Three-Axle Truck							197	162
Semi Trailer							189	141
Open Drag-on							275	310
Other Vehicle								3
C&D Totals							1,036	1,149
Overall Totals							1,507	1,620

Note that the sampling plan called for 21 single-family residential samples from each of three geographical areas (north, central, and south) and from each of two types of routes (with recycling services and without recycling services). Additional *yard waste samples* were scheduled to determine the prevalence of recyclable organics in the waste disposed by single-family residences in specific communities.

The regions used for this study are shown graphically in Figure 12.

FIGURE 12: DIVISION OF THE CITY INTO THREE REGIONS

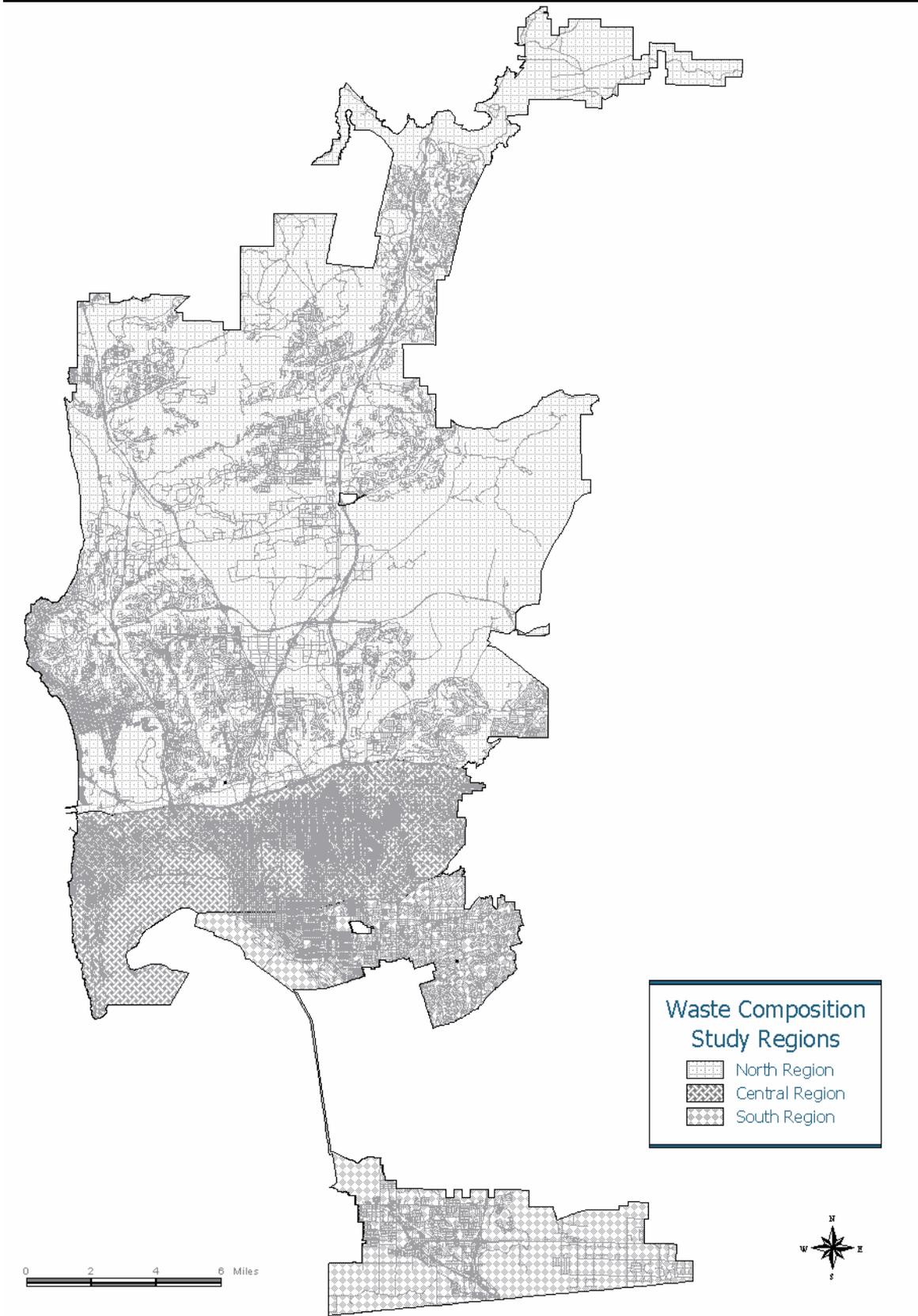


Table 84 presents a more detailed breakdown of C&D samples, indicating the numbers of samples obtained from each generating sector and subsector.

TABLE 84: C&D SAMPLE COUNTS BY GENERATING SECTOR

Generating Sector & Subsector	Samples
Residential	93
Commercial	793
Military	83
<i>In city</i>	72
<i>Out of city</i>	11
City Department	180
<i>Streets Department</i>	119
<i>Schools</i>	6
<i>Water & Metro</i>	33
<i>Other City Departments</i>	22
C&D Totals	1,149

Finally, Table 85 shows the distribution of samples from each generating sector across the three seasons of the study.

TABLE 85: DISTRIBUTION OF SAMPLES BY SEASON

	Nov. 1999	Feb-Mar 2000	May 2000	Totals
MSW				
Single-Family Residential	100	97	103	300
Multifamily Residential	18	16	20	54
Commercial	34	33	35	102
Military	4	7	4	15
MSW Totals	156	153	162	471
C&D				
Residential	45	22	26	93
Commercial	304	241	248	793
Military	12	30	41	83
<i>In city</i>	9	24	39	72
<i>Out of city</i>	3	6	2	11
City Department	24	90	66	180
<i>Streets Department</i>	10	63	46	73
<i>Schools</i>	3	0	3	3
<i>Water & Metro</i>	2	20	11	22
<i>Other City Departments</i>	9	7	6	16
C&D Totals	385	383	381	1149
Overall Totals	541	536	543	1,620

SELECTION AND CHARACTERIZATION OF WASTE SAMPLES

City staff made arrangements with City haulers and franchised haulers to divert particular MSW loads for sampling. For commercial MSW that was delivered in drag-on boxes, Cascadia developed a selection system that required scale-house personnel to send randomly chosen loads to the sampling crew. Samples weighing approximately 250 pounds were pulled from randomly chosen sections of each load and were sorted into 67 material categories. The weight of each material in each sample was recorded for later analysis.

C&D loads were selected in two ways. Drag-on boxes, two-axle trucks, and three-axle trucks were selected by scale house staff according to a schedule of randomly chosen times of day. Semi trucks and other vehicles were selected by the C&D field observer, according to a daily quota by vehicle type. The volume of each material in each load was estimated visually, and volume-to-weight conversion factors were used later to estimate the weight of each material type in each load. Appendix G contains the volume-to-weight conversion factors that were used for C&D waste.

The material categories that were used in characterizing MSW and C&D waste are listed in Appendix B.

DEVELOPMENT OF COMPOSITION ESTIMATES

Sample records were analyzed to calculate estimates of waste composition for individual strata within the waste stream. (For an example, see Figure 13 and Figure 14.) Then, composition estimates for selected strata were combined using weighted averages to determine the composition of larger portions of the waste stream. The weightings for the weighted averages were obtained from tonnage figures provided by the City for each stratum. (See Figure 15 for an example, and see Appendix A for complete detail.)

For example, the Commercial MSW portion of the waste stream was divided into three strata, according to the type of vehicle that delivered the waste for disposal. The Commercial MSW strata are shown in Figure 13, along with the 1999 tonnage assigned to each stratum.

FIGURE 13: EXAMPLE OF WEIGHTING BY TONS FOR THREE STRATA

Stratum Label	Description	1999 Tons	Percentage of Commercial MSW
J	Commercial or fee-exempt MSW that was delivered to Miramar Landfill or other City landfills in front-loaders, rear-loaders, side-loaders, or other vehicles not classified	214,661	47.5%
K	Commercial or fee-exempt MSW that was delivered to Miramar Landfill or other City landfills in open drag-on boxes	130,814	29.0%
L	Commercial or fee-exempt MSW that was delivered to Miramar Landfill or other City landfills in compactor drag-on boxes	106,324	23.5%
Total Commercial MSW		451,799	100.0%

Waste samples were sorted for each stratum, yielding estimates of the prevalence of 67 distinct materials in the waste for each stratum. The estimates for one such material, *uncoated corrugated cardboard*, are shown in Figure 14.

FIGURE 14: EXAMPLE OF COMPOSITION ESTIMATES FOR A SINGLE MATERIAL FOR THREE STRATA

Stratum Label		Percent of Waste that is Other Corrugated Cardboard
J	(packer trucks & other)	9.3%
K	(open drag-on)	8.2%
L	(compactor drag-on)	12.4%

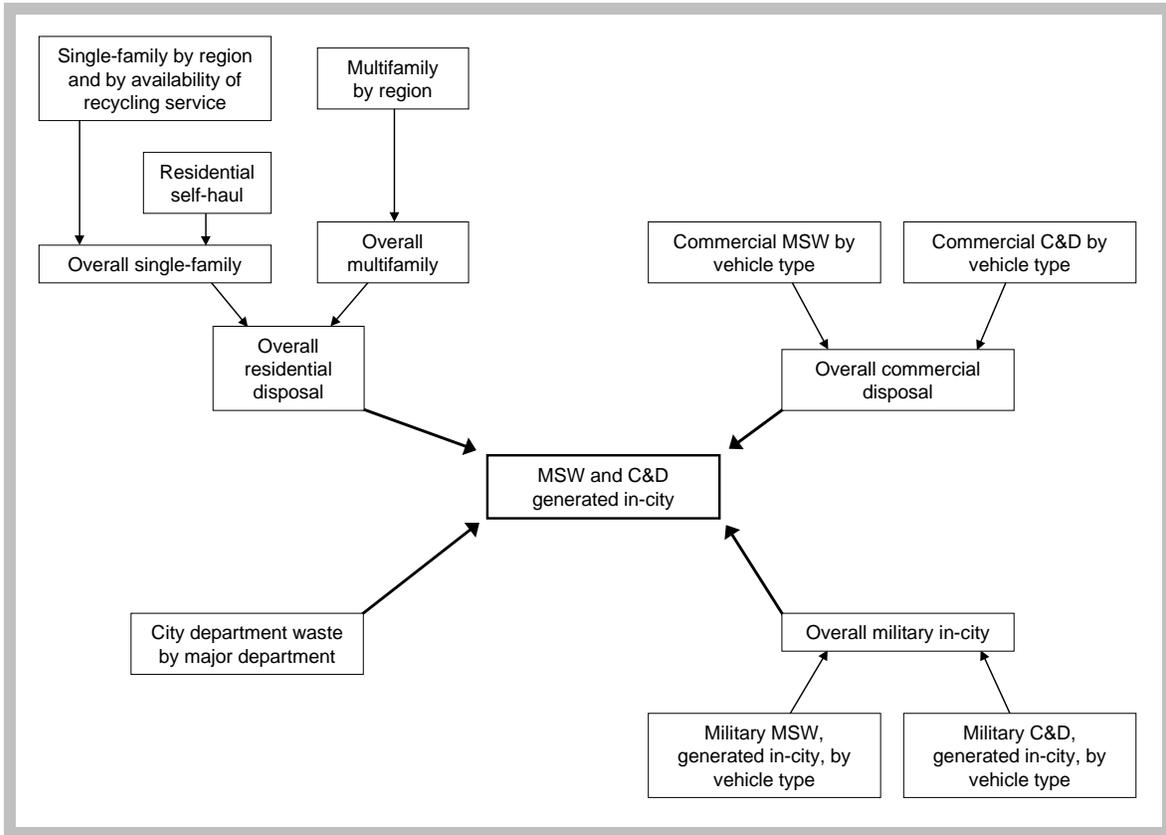
The prevalence of *uncoated corrugated cardboard* in all commercial MSW would then be calculated with a weighted average of the composition figures for individual strata, as shown in Figure 15. Similar calculations would be done for the other materials.

FIGURE 15: EXAMPLE OF COMPOSITION CALCULATION USING WEIGHTED AVERAGES

$$\text{Uncoated corrugated cardboard in commercial MSW} = (0.475 \times 0.093) + (0.290 \times 0.082) + (0.235 \times 0.124) = 0.097 = 9.7\%.$$

Figure 16 summarizes the way individual strata were combined to develop composition estimates for larger sectors of the waste stream. A more detailed accounting of the strata, vehicle types, and tonnage figures is found in Appendix A.

FIGURE 16: OVERVIEW OF THE DEVELOPMENT OF COMPOSITION ESTIMATES



SAMPLING CALENDAR

In order to capture any seasonal variation, the samples were distributed across three seasons. Working around major holidays and the sorting crew’s availability, sampling dates were selected to be representative of “typical” waste disposal days within a given season. Material disposed on weekend days was specifically included in the samples.

A period of heavy rains during the winter season necessitated a pause in C&D visual observations. The observations resumed as soon as conditions permitted staff to move quickly and safely among the vehicles delivering waste to the landfill.

FIGURE 17: WASTE SAMPLING CALENDAR

Season	Date	MSW	C&D
Autumn 1999	11/3/99	X	
	11/4/99	X	
	11/5/99	X	
	11/8/99	X	X
	11/9/99	X	X
	11/10/99	X	X
	11/11/99		X
	11/12/99		X
	11/13/99		X
	11/15/99		X
	11/16/99		X
	11/17/99		X
	11/18/99		X
	Winter 1999-2000	2/14/00	
2/15/00			X
2/16/00		X	X
2/17/00		X	X
2/18/00		X	X
2/19/00		X	X
2/21/00		X	
2/22/00		X	
2/23/00		X	
2/24/00		X	
2/29/00			X
3/1/00			X
3/2/00			X
3/3/00			X
Spring 2000	5/15/00		X
	5/16/00	X	X
	5/17/00	X	X
	5/18/00	X	X
	5/19/00	X	X
	5/20/00		X
	5/22/00	X	X
	5/23/00	X	X
	5/24/00	X	X
	5/25/00		X

SORTING PROCEDURE FOR MSW

Each sample was selected from the designated vehicle (chosen by City staff or through the random selection process described elsewhere in this appendix), and each sample was sorted by hand into the component groups. The weights of all materials were recorded on tally sheets, as shown in Appendix F.

For the waste sampling, 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 and visually estimated the percentage of each component in the supermix.

VISUAL CHARACTERIZATION PROCEDURE FOR C&D WASTE

First the driver of the vehicle containing C&D waste was interviewed to obtain data about the load. The following data were recorded for each load:

- Net weight
- Transaction number
- Vehicle type
- Origin number (as recorded on the weight ticket)
- Generating sector
- City department, for waste hauled by city departments

Then, the total volume of the load was estimated, using a tape measure to record the length, width and height of the load.

The C&D observer used the field form (shown in Appendix F) to note all material types that were present in the load, regardless of the amount of each material. After all material types had been flagged on the field form, the observer estimated the percentage of the load volume corresponding with each material type, going from largest percentage to smallest. This procedure was continued until each of the remaining material types that were present was observed to reflect less than 10% of the volume of the load. All material types that each represented less than 10% of the volume of the load were aggregated and treated as Remainder/Composite Construction and Demolition Waste.

The volume data for each material type in each load was converted to tonnage data using the volume-to-weight conversion factors shown in Appendix G.

APPENDIX E: 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:

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

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:

$$r_j \pm \left(t \cdot \sqrt{V_{r_j}^2}\right)$$

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, multi-family, north, south, and seasonal composition estimates were calculated by performing a weighted average across the relevant substreams.

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:

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

COMPARISON CALCULATIONS

BACKGROUND

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 trends within the residential substream, in the percentage of selected types of waste disposed over time and between substreams. One specific example is stated as follows:

Hypothesis: "There is no statistically significant difference, between the amount of recyclable paper disposed by North residents with recycling services and North residents without such services."

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 between the groups. "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

¹ Please see the "Power Analysis" discussion on page E-3.

PROCEDURES USED

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:

$$S_{pool}^2 = \frac{[(n1 - 1) \cdot (n1 \cdot \bar{v}_{rj1}^2)] + [(n2 - 1) \cdot (n2 \cdot \bar{v}_{rj2}^2)]}{n1 + n2 - 2}$$

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.

STATISTICAL CONSIDERATIONS

The analyses are based on the component percentages, by weight. As described in section entitled *Composition Calculations*, 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 variations between groups of samples.

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 may be inclined to dispose of material B at the same time).

There is certainly a degree of dependence between the calculated percentages. Because the percentages sum to 100 (in the case of year-to-year comparisons) or near 100 (in the case of subpopulation comparisons), if the percentage of material A increases, the percentage of some other material must decrease.

MULTIPLE T-TESTS

In all statistical tests, there is a chance of incorrectly concluding that a result is significant. The year-to-year comparison required conducting several t-tests (one for each waste category) **each** of which carries that risk. However, we were willing to accept only a 10% chance, **overall**, of making an incorrect conclusion. Therefore, each test was adjusted by setting the significance threshold to $\frac{0.10}{w}$ (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 the comparisons of recyclable materials made in this study is restricted to 10% overall, or 1.25% for each test (10% divided by the eight tests within the residential substream equals 1.25%). Among, the subpopulation comparisons, the chance of a false positive results is also restricted to 10% overall and 0.91% for each test (10% divided by the eleven tests performed).

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).

DATA COLLECTION FORM FOR ESTIMATING MATERIAL VOLUMES IN C&D SAMPLES

<p>Step 1</p> <p>Date: _____</p>	<p>Step 2: Net Weight: _____ tons lbs (circle one)</p> <p>Transaction #: _____ (if net weight not available)</p> <p>Vehicle: <input type="checkbox"/> Pick-Up <input type="checkbox"/> Two Axle <input type="checkbox"/> Three Axle <input type="checkbox"/> Semi Trailer <input type="checkbox"/> Open Drag-on <input type="checkbox"/> Other</p>	<p>Source: Origin #: _____</p> <p><input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Military <input type="checkbox"/> City Department <input type="checkbox"/> Streets Div. <input type="checkbox"/> City Schools <input type="checkbox"/> Water & Metro <input type="checkbox"/> Other City Dept.</p>	<p>Notes:</p>																																																																																																
<p>Step 3: Vol of Load: _____ yds³ or Dimensions: _____ ft x _____ ft x _____ ft</p>																																																																																																			
<p>Step 4: Observe the load. Circle the names of materials that appear in the load.</p>																																																																																																			
<p>Step 5: Record percentage of load volume for each of these categories. Calculate subtotal.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Concrete <input type="text"/></td> <td style="width: 25%;">Non-Treated Lumber <input type="text"/></td> <td style="width: 25%;">Rocks, Soil & Fines <input type="text"/></td> <td style="width: 25%;"></td> </tr> <tr> <td>Asphalt Paving <input type="text"/></td> <td>Treated Lumber <input type="text"/></td> <td>Contam. Soil, Street Sweep-ings, Drain Cleanings <input type="text"/></td> <td>Subtotal for this step <input type="text"/></td> </tr> <tr> <td>Asphalt Roofing <input type="text"/></td> <td>Gypsum Board <input type="text"/></td> <td>Carpet & Carpet Padding <input type="text"/></td> <td></td> </tr> </table>				Concrete <input type="text"/>	Non-Treated Lumber <input type="text"/>	Rocks, Soil & Fines <input type="text"/>		Asphalt Paving <input type="text"/>	Treated Lumber <input type="text"/>	Contam. Soil, Street Sweep-ings, Drain Cleanings <input type="text"/>	Subtotal for this step <input type="text"/>	Asphalt Roofing <input type="text"/>	Gypsum Board <input type="text"/>	Carpet & Carpet Padding <input type="text"/>																																																																																					
Concrete <input type="text"/>	Non-Treated Lumber <input type="text"/>	Rocks, Soil & Fines <input type="text"/>																																																																																																	
Asphalt Paving <input type="text"/>	Treated Lumber <input type="text"/>	Contam. Soil, Street Sweep-ings, Drain Cleanings <input type="text"/>	Subtotal for this step <input type="text"/>																																																																																																
Asphalt Roofing <input type="text"/>	Gypsum Board <input type="text"/>	Carpet & Carpet Padding <input type="text"/>																																																																																																	
<p>Step 6: Record percentage of load volume for each of these categories that represents 10% or more of the weight of the load. Calculate subtotal.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Paper</td> <td style="width: 30%;">Metal</td> <td style="width: 30%;">Organic</td> <td></td> </tr> <tr> <td>Uncoated Corrugated Cardboard <input type="text"/></td> <td>Tin/Steel Cans <input type="text"/></td> <td>Food <input type="text"/></td> <td></td> </tr> <tr> <td>Waxed Corr. Cdbd (not polycoat) <input type="text"/></td> <td>Major Appliances <input type="text"/></td> <td>Leaves & Grass <input type="text"/></td> <td></td> </tr> <tr> <td>Paper Bags <input type="text"/></td> <td>Other Ferrous Metal <input type="text"/></td> <td>Prunings & Trimmings <input type="text"/></td> <td></td> </tr> <tr> <td>Newspaper <input type="text"/></td> <td>CRV Aluminum Cans <input type="text"/></td> <td>Branches & Stumps <input type="text"/></td> <td></td> </tr> <tr> <td>White Ledger Paper <input type="text"/></td> <td>Non-CRV Aluminum Cans <input type="text"/></td> <td>Agricultural Crop Residues <input type="text"/></td> <td></td> </tr> <tr> <td>Colored Ledger Paper <input type="text"/></td> <td>Other Non-Ferrous Metal <input type="text"/></td> <td>Manures <input type="text"/></td> <td></td> </tr> <tr> <td>Computer Paper <input type="text"/></td> <td>Remainder/Composite Metal <input type="text"/></td> <td>Textiles <input type="text"/></td> <td></td> </tr> <tr> <td>Other Office Paper <input type="text"/></td> <td></td> <td>Diapers <input type="text"/></td> <td></td> </tr> <tr> <td>Magazines and Catalogs <input type="text"/></td> <td>Plastic</td> <td>Remainder/Composite Organic <input type="text"/></td> <td></td> </tr> <tr> <td>Phone Books and Directories <input type="text"/></td> <td>CRV HDPE Containers <input type="text"/></td> <td></td> <td></td> </tr> <tr> <td>Other Miscellaneous Paper <input type="text"/></td> <td>Non-CRV HDPE Containers <input type="text"/></td> <td>Special</td> <td></td> </tr> <tr> <td>Remainder/Composite Paper <input type="text"/></td> <td>CRV PETE Containers <input type="text"/></td> <td>Ash <input type="text"/></td> <td></td> </tr> <tr> <td>Glass</td> <td>Non-CRV PETE Containers <input type="text"/></td> <td>Sewage Solids <input type="text"/></td> <td></td> </tr> <tr> <td>CRV Clear Bottles <input type="text"/></td> <td>Miscellaneous Plastic Cont. <input type="text"/></td> <td>Industrial Sludge <input type="text"/></td> <td></td> </tr> <tr> <td>Non-CRV Clear Bottles & Cont. <input type="text"/></td> <td>Film Plastic <input type="text"/></td> <td>Treated Medical Waste <input type="text"/></td> <td></td> </tr> <tr> <td>CRV Brown Bottles <input type="text"/></td> <td>Durable Plastic Items <input type="text"/></td> <td>Bulky Items <input type="text"/></td> <td></td> </tr> <tr> <td>Non-CRV Brown Bottles & Cont. <input type="text"/></td> <td>Remainder/Composite Plas. <input type="text"/></td> <td>Tires <input type="text"/></td> <td></td> </tr> <tr> <td>CRV Other Bottles <input type="text"/></td> <td>Hazardous</td> <td>Remainder/Composite Special <input type="text"/></td> <td></td> </tr> <tr> <td>Non-CRV Other Bottles & Cont. <input type="text"/></td> <td>Paint <input type="text"/></td> <td></td> <td></td> </tr> <tr> <td>Flat Glass <input type="text"/></td> <td>Vehicle & Equipment Fluids <input type="text"/></td> <td></td> <td></td> </tr> <tr> <td>Remainder/Composite Glass <input type="text"/></td> <td>Used Oil <input type="text"/></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Batteries <input type="text"/></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Remainder/Composite Haz. <input type="text"/></td> <td></td> <td></td> </tr> </table>				Paper	Metal	Organic		Uncoated Corrugated Cardboard <input type="text"/>	Tin/Steel Cans <input type="text"/>	Food <input type="text"/>		Waxed Corr. Cdbd (not polycoat) <input type="text"/>	Major Appliances <input type="text"/>	Leaves & Grass <input type="text"/>		Paper Bags <input type="text"/>	Other Ferrous Metal <input type="text"/>	Prunings & Trimmings <input type="text"/>		Newspaper <input type="text"/>	CRV Aluminum Cans <input type="text"/>	Branches & Stumps <input type="text"/>		White Ledger Paper <input type="text"/>	Non-CRV Aluminum Cans <input type="text"/>	Agricultural Crop Residues <input type="text"/>		Colored Ledger Paper <input type="text"/>	Other Non-Ferrous Metal <input type="text"/>	Manures <input type="text"/>		Computer Paper <input type="text"/>	Remainder/Composite Metal <input type="text"/>	Textiles <input type="text"/>		Other Office Paper <input type="text"/>		Diapers <input type="text"/>		Magazines and Catalogs <input type="text"/>	Plastic	Remainder/Composite Organic <input type="text"/>		Phone Books and Directories <input type="text"/>	CRV HDPE Containers <input type="text"/>			Other Miscellaneous Paper <input type="text"/>	Non-CRV HDPE Containers <input type="text"/>	Special		Remainder/Composite Paper <input type="text"/>	CRV PETE Containers <input type="text"/>	Ash <input type="text"/>		Glass	Non-CRV PETE Containers <input type="text"/>	Sewage Solids <input type="text"/>		CRV Clear Bottles <input type="text"/>	Miscellaneous Plastic Cont. <input type="text"/>	Industrial Sludge <input type="text"/>		Non-CRV Clear Bottles & Cont. <input type="text"/>	Film Plastic <input type="text"/>	Treated Medical Waste <input type="text"/>		CRV Brown Bottles <input type="text"/>	Durable Plastic Items <input type="text"/>	Bulky Items <input type="text"/>		Non-CRV Brown Bottles & Cont. <input type="text"/>	Remainder/Composite Plas. <input type="text"/>	Tires <input type="text"/>		CRV Other Bottles <input type="text"/>	Hazardous	Remainder/Composite Special <input type="text"/>		Non-CRV Other Bottles & Cont. <input type="text"/>	Paint <input type="text"/>			Flat Glass <input type="text"/>	Vehicle & Equipment Fluids <input type="text"/>			Remainder/Composite Glass <input type="text"/>	Used Oil <input type="text"/>				Batteries <input type="text"/>				Remainder/Composite Haz. <input type="text"/>		
Paper	Metal	Organic																																																																																																	
Uncoated Corrugated Cardboard <input type="text"/>	Tin/Steel Cans <input type="text"/>	Food <input type="text"/>																																																																																																	
Waxed Corr. Cdbd (not polycoat) <input type="text"/>	Major Appliances <input type="text"/>	Leaves & Grass <input type="text"/>																																																																																																	
Paper Bags <input type="text"/>	Other Ferrous Metal <input type="text"/>	Prunings & Trimmings <input type="text"/>																																																																																																	
Newspaper <input type="text"/>	CRV Aluminum Cans <input type="text"/>	Branches & Stumps <input type="text"/>																																																																																																	
White Ledger Paper <input type="text"/>	Non-CRV Aluminum Cans <input type="text"/>	Agricultural Crop Residues <input type="text"/>																																																																																																	
Colored Ledger Paper <input type="text"/>	Other Non-Ferrous Metal <input type="text"/>	Manures <input type="text"/>																																																																																																	
Computer Paper <input type="text"/>	Remainder/Composite Metal <input type="text"/>	Textiles <input type="text"/>																																																																																																	
Other Office Paper <input type="text"/>		Diapers <input type="text"/>																																																																																																	
Magazines and Catalogs <input type="text"/>	Plastic	Remainder/Composite Organic <input type="text"/>																																																																																																	
Phone Books and Directories <input type="text"/>	CRV HDPE Containers <input type="text"/>																																																																																																		
Other Miscellaneous Paper <input type="text"/>	Non-CRV HDPE Containers <input type="text"/>	Special																																																																																																	
Remainder/Composite Paper <input type="text"/>	CRV PETE Containers <input type="text"/>	Ash <input type="text"/>																																																																																																	
Glass	Non-CRV PETE Containers <input type="text"/>	Sewage Solids <input type="text"/>																																																																																																	
CRV Clear Bottles <input type="text"/>	Miscellaneous Plastic Cont. <input type="text"/>	Industrial Sludge <input type="text"/>																																																																																																	
Non-CRV Clear Bottles & Cont. <input type="text"/>	Film Plastic <input type="text"/>	Treated Medical Waste <input type="text"/>																																																																																																	
CRV Brown Bottles <input type="text"/>	Durable Plastic Items <input type="text"/>	Bulky Items <input type="text"/>																																																																																																	
Non-CRV Brown Bottles & Cont. <input type="text"/>	Remainder/Composite Plas. <input type="text"/>	Tires <input type="text"/>																																																																																																	
CRV Other Bottles <input type="text"/>	Hazardous	Remainder/Composite Special <input type="text"/>																																																																																																	
Non-CRV Other Bottles & Cont. <input type="text"/>	Paint <input type="text"/>																																																																																																		
Flat Glass <input type="text"/>	Vehicle & Equipment Fluids <input type="text"/>																																																																																																		
Remainder/Composite Glass <input type="text"/>	Used Oil <input type="text"/>																																																																																																		
	Batteries <input type="text"/>																																																																																																		
	Remainder/Composite Haz. <input type="text"/>																																																																																																		
<p>Step 7: Record percentage by volume of all material unaccounted for in Steps 5 & 6.</p> <p>Remainder/composite C&D <input type="text"/></p>			<p>Step 8: Make sure the recorded percentages add up to 100%.</p>																																																																																																

EXAMPLE OF FORM FOR RANDOM SELECTION OF MSW DRAG-ON LOADS

	Lane 1	Lane 2	Lane 3
Tuesday, May 16	2:00 Open Drag-On	11:15 Open Drag-On 1:30 Compactor	3:00 Compactor
Wednesday, May 17	9:15 Compactor 9:45 Open Drag-On	1:15 Open Drag-On	8:15 Compactor
Thursday, May 18	9:00 Compactor 12:45 Open Drag-On		8:30 Open Drag-On 2:30 Compactor
Friday, May 19	11:15 Open Drag-On 12:00 Compactor		9:30 Open Drag-On 10:45 Compactor
Saturday, May 20			
Sunday, May 21			
Monday, May 22	12:30 Compactor	7:30 Open Drag-On 12:00 Open Drag-On	
Tuesday, May 23	7:45 Compactor	11:00 Compactor	7:45 Open Drag-On 2:30 Open Drag-On
Wednesday, May 24	MAKE-UPS AS NEEDED	MAKE-UPS AS NEEDED	MAKE-UPS AS NEEDED

EXAMPLE OF FORM FOR RANDOM SELECTION OF C&D LOADS FOR CERTAIN VEHICLE TYPES

Demolition Vehicle Sampling for

Monday, May 15

Lane 2

During each hour of the day, please send the following DEMOLITION vehicles to the PUBLIC SMALL VEHICLE AREA for sampling. Place one of the pink "demolition sample" tags in the windshield of each vehicle you send there. Mark the check box for each vehicle when you send it. **If a check box remains unmarked after an hour, keep carrying it forward through the day until you get the right kind of vehicle to send.**

During this hour:

Choose one of each of these vehicles:

8 - 9 am

- Open drag-on (city)
- Open drag-on

9 - 10 am

- Open drag-on
- Open drag-on
- Three-axle

10 - 11 am

- Open drag-on
- Three-axle (city)

11 am - Noon

- Two-axle (city)
- Three-axle (city)

Noon - 1 pm

- Open drag-on
- Three-axle (city)

1 - 2 pm

- Two-axle (city)
- Two-axle

APPENDIX G: VOLUME TO WEIGHT CONVERSION FACTORS

The following conversion factors were used to estimate the weight of individual materials in C&D loads, given visual estimates of the volume of each material.

Material ID	Material	Pounds per	
		cu yd	Data Source
1	Uncoated Corrugated Cardboard	300	NRC* figure for corrugated cardboard
2	Waxed Corrugated Cardboard	300	NRC figure for corrugated cardboard
3	Paper Bags	108	Figure previously used by the County of San Diego
4	Newspaper	360	NRC figure for uncompacted newspaper
5	White Ledger Paper	110	EPA** figure for crumpled mixed ledger/office paper
6	Colored Ledger Paper	110	EPA figure for crumpled mixed ledger/office paper
7	Computer Paper	110	EPA figure for crumpled mixed ledger/office paper
8	Other Office Paper	110	EPA figure for crumpled mixed ledger/office paper
9	Magazines and Catalogs	380	EPA figure for flat mixed ledger/office paper
10	Phone Books and Directories	250	EPA figure for telephone directories
11	Other Miscellaneous Paper	110	EPA figure for crumpled mixed ledger/office paper
12	Remainder/Composite Paper	110	EPA figure for crumpled mixed ledger/office paper
13	CRV Clear Bottles	600	EPA figure for whole glass bottles
14	Non-CRV Clear Bottles and Containers	600	EPA figure for whole glass bottles
15	CRV Brown Bottles	600	EPA figure for whole glass bottles

Material ID	Material	Pounds per cu yd	Data Source
16	Non-CRV Brown Bottles and Containers	600	EPA figure for whole glass bottles
17	CRV Other Colored Bottles	600	EPA figure for whole glass bottles
18	Non-CRV & Other Colored Bottles and Containers	600	EPA figure for whole glass bottles
19	Flat Glass	1800	EPA figure for mechanically crushed glass
20	Remainer/Composite Glass	1000	EPA figure for semicrushed glass
21	Tin/Steel Cans	150	EPA figure for whole tin cans
22	Major Appliances	180	EPA figure for the average weights of various appliances that measure approximately one cubic yard
23	Other Ferrous Metal	540	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
24	CRV Aluminum Cans	63	EPA figure for whole aluminum cans
25	Non-CRV Aluminum Cans	63	EPA figure for whole aluminum cans
26	Other Non-Ferrous Metal	540	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
27	Remainder/Composite Metal	540	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
28	CRV HDPE Containers	24	EPA figure for whole, uncompacted HDPE containers
29	Non-CRV HDPE Containers	24	EPA figure for whole, uncompacted HDPE containers
30	CRV PETE Containers	40	EPA figure for whole, uncompacted PET containers

Material ID	Material	Pounds per cu yd	Data Source
31	Non-CRV PETE Containers	40	EPA figure for whole, uncompacted PET containers
32	Miscellaneous Plastic Containers	32	EPA figure for mixed PET and HDPE containers
33	Film Plastic	32	EPA figure for mixed PET and HDPE containers
34	Durable Plastic Items	50	EPA figure for other uncompacted plastic
35	Remainder/Composite Plastic	50	EPA figure for other uncompacted plastic
36	Food		Not calculated.
37	Leaves and Grass	400	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
38	Prunings and Trimmings	375	Calculated from weight of known pure loads.***
39	Branches and Stumps	450	Calculated from weight of known pure loads.
40	Agricultural Crop Residues	400	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
41	Manures		Not calculated.
42	Textiles	175	EPA figure for mixed textiles
43	Diapers		Not calculated.
44	Remainder/Composite Organic	910	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
45	Concrete	2000	Calculated from weight of known pure loads.

Material ID	Material	Pounds per cu yd	Data Source
46	Asphalt Paving	1154	Figure previously used by the County of San Diego
47	Asphalt Roofing	600	Calculated from weight of known pure loads.
48	Non-Treated Lumber	360	Figure previously used by the City of San Diego
49	Treated Lumber	360	Figure previously used by the City of San Diego
50	Gypsum Board	410	Figure previously used by the County of San Diego
51	Rock, Soil and Fines	1700	Calculated from weight of known pure loads.
52	Contaminated soil, street sweepings, drain cleanings	1400	Calculated from weight of known pure loads.
53	Carpet & Carpet Padding	305	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
54	Remainder/Composite Construction and Demolition	207	Figure from ISWM Eng. Principles (a figure previously used by the City of San Diego)
55	Paint		Not calculated.
56	Vehicle and Equipment Fluids		Not calculated.
57	Used Oil		Not calculated.
58	Batteries		Not calculated.
59	Remainder/Composite Household Hazardous		Not calculated.
60	Ash		Not calculated.

Material ID	Material	Pounds per cu yd	Data Source
61	Sewage Solids	1175	Calculated from weight of known pure loads.
62	Industrial Sludge	1100	Calculated from weight of known pure loads.
63	Treated Medical Waste		Not calculated.
64	Bulky Items	180	EPA figure for the average weights of various appliances that measure approximately one cubic yard
65	Tires	210	EPA figure for tires
66	Remainder/Composite Special Waste		Not calculated.
67	Mixed Residue		Not calculated.

* NRC refers to the National Recycling Coalition's publication, *Volume and Count to Weight Conversion Factors for Recyclables*.

** EPA figures were drawn from the U.S. Environmental Protection Agency's publication, *Measuring Recycling: A Guide for State and Local Governments*, document number EPA530-R-97-011, published September 1997.

*** Pure load calculations were based on actual data collected for the present study. The value represents the average pounds per cubic yard for all vehicles whose observed loads contained 100 percent of the material type.