



**Regional District of Nanaimo
Solid Waste Composition Study**

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Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

Attention: Mr. Alan Stanley
Waste Reduction Coordinator

Dear Al:

Re: Solid Waste Stream Composition Study

We are pleased to submit our final report on the RDN solid waste composition. This report provides a description of the methodology employed to conduct the waste composition study at the Regional Landfill and the Church Road Transfer Station, presents the findings from the study, and provides some recommendations that may improve the waste management system.

We trust you will find our report informative and to your satisfaction. We appreciate this opportunity to be of service.

Yours very truly,
GARTNER LEE LIMITED

Maura H. Walker
Senior Environmental Planner

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- Appendix B. Waste Material Categories
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1. Introduction

As part of the 2004 Solid Waste Management Plan, the Regional District of Nanaimo (RDN) identified the need for a solid waste composition study. This study will help the RDN understand the nature of the present day solid waste stream, both in terms of knowing its diversion potential and for setting program and budget priorities. The information derived from the solid waste composition study, will allow the RDN to more effectively plan their solid waste management needs. Gartner Lee Limited (GLL) was retained to conduct the sampling exercise and the data analysis.

The primary objectives of the study were to:

- determine the composition of solid waste being disposed by material type;
- determine the composition of waste by generator type (curbside residential, multi-family residential, industrial, commercial, institutional (ICI) and construction / demolition (CD) sectors);
- produce a detailed profile of the compostable waste being disposed;
- complete a detailed characterization of solid waste being generated by specified single-family residential waste collection routes with an emphasis on determining the amount of compostable organic material; and
- produce a detailed profile of solid waste generated the multi-family sector, with an emphasis on determining the amount of compostable, organic material.

The waste composition study was conducted over four days in September 2004 at the Regional Landfill and the Church Road Transfer Station. The Regional Landfill and Church Road Transfer Station are owned and operated by the Regional District of Nanaimo. The RDN waste management system serves a population of approximately 134,475¹. The RDN disposed of 54,901² tonnes of municipal solid waste in 2003.

The waste composition study represents a one-time sampling of the RDN solid waste stream. As this study represents a “snap-shot” of the solid waste stream, the resultant data may not reflect seasonal variations. However, based on discussions with RDN staff, it is understood that the composition of the waste stream does not vary substantially throughout the year with the exception of the percentage of roofing and yard waste being minimal in the winter months. Given this information, the study data is believed to provide a fair representation of all other material categories in the RDN waste stream.

¹ BC Statistics

² RDN Data (2003)

RDN Solid Waste Composition Study

This report provides a description of the methodology employed to conduct the waste composition study, presents summary data and findings from the study, and provides recommendations that may improve the waste management system in the RDN. Detailed data sheets are in Appendix A.



Waste Sorting Crew Recording Material Weights at Regional Landfill

2. Solid Waste Composition Study

The following tasks outline the work performed during the solid waste composition study:

1. *Composition Study Set Up* This task required RDN staff to arrange for consultant access and space to conduct the waste sorting exercise in an inactive area of the landfill and transfer station. Additionally, Gartner Lee staff worked with the RDN waste reduction coordinator to obtain background data and select the most appropriate days for the study.
2. *Waste Sort Categories* To ensure consistency with existing RDN data, and to identify emerging waste streams, GLL worked with the RDN to establish thirty-three categories for the waste sort. Appendix B provides the waste sort categories utilized during the study.
3. *Sampling* The Canadian Council of Minister's of the Environment (CCME) Guidelines and the *BC Procedural Manual for Municipal Solid Waste Composition Analysis* were used to determine the target sample size from each waste generator sector (residential, industrial, commercial and institutional (ICI) and Construction / Demolition (CD)). Statistical analysis determined that the results of this study are accurate to an 81% confidence +/- 20%, which is consistent with the ASTM (American Society for Testing and Materials) "*Standard Test Method for Determination of the Composition of Unprocessed Solid Waste*".



Waste Composition Study at Church Road Transfer Station

RDN Solid Waste Composition Study

Based on 2003 scalehouse data, it was identified that, by weight, the industrial, commercial and institutional (ICI) sector represented approximately 57%, the residential sector represented 28%, and the self-haul sector represented 15% of the solid waste disposed in the RDN³.

The objective of this study was to examine thirty 125 kg samples of waste at the landfill and transfer station. The total number of samples was divided proportionately by disposal facility and by the contribution to the waste stream of each waste generator sector.

Visual stratification and quartering were used to obtain each sample from the target loads. Each sample was hand-sorted into thirty-three categories and weighed. The material weights and the 2003 scalehouse data were used to develop a profile of the solid waste stream for each waste generation sector (residential, ICI, self-haul and CD), as well as for the overall waste composition of the Regional District of Nanaimo.

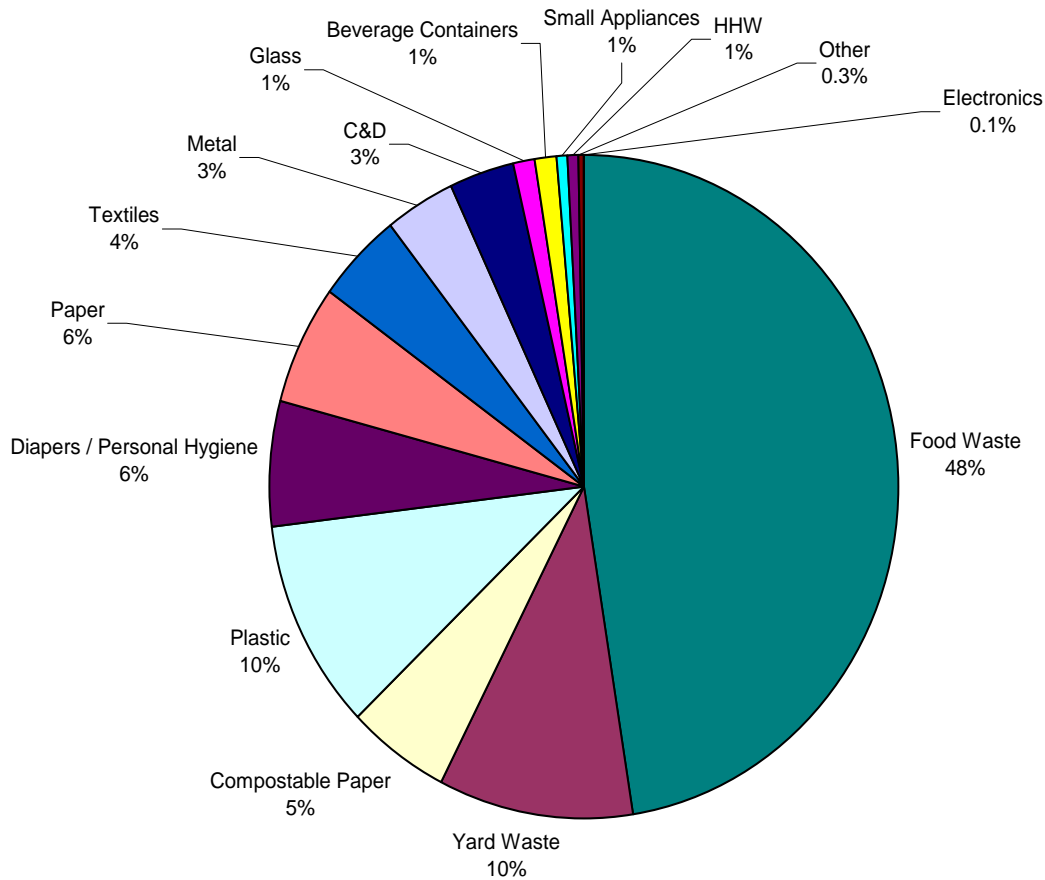
³ Construction/demolition waste was assessed separately in this study as it is not managed in the same manner as the other three streams.

2.1 Curbside Residential Solid Waste Stream

The composition of the curbside residential solid waste stream in the RDN was determined through sampling of incoming garbage trucks at the Regional Landfill and the Church Road Transfer Station. Data for individual communities sampled during the study, plus amalgamated data representing the RDN-serviced routes (Cedar, Whiskey Creek and Parksville) is also provided in this section. The data from each sample can be found in Appendix A.

Figure 1 illustrates the estimated composition of the whole curbside residential solid waste stream in the RDN. As shown, the primary components of the waste stream are compostable food waste (48%), yard waste (10%), compostable waste paper (5%), plastics (10%), diapers / personal hygiene (6%), recyclable paper products (6%), textiles (4%), metal (3%), and construction / demolition waste (3%).

Figure 1. Curbside Residential Waste Stream Composition



RDN Solid Waste Composition Study

- Collectively, compostable materials represented 63% of the curbside residential solid waste stream. This category consisted primarily of household food waste (48%), yard waste (10%) and compostable paper products such as paper towels and tissues (5%).
- Plastics represented the second largest category (10%). This category consisted primarily of non-recyclable mixed plastics (5%); the remainder consisted of film plastic (3%) and recyclable rigid food containers (2%).
- Diapers and personal hygiene products made up (6%) of the curbside residential solid waste stream.
- Recyclable paper products (6%) observed consisted of mixed paper (3%), newspaper (3%), and cardboard boxes (0.5%).
- Textiles (4%) observed during the study were clean and reusable; the majority of this category consisted of clothing, stuffed toys and household items.
- Metals observed in this waste sector consisted of scrap metal (2%) and food containers (2%).
- Construction / Demolition (CD) waste consisted of coated /painted wood waste (1%), clean wood waste (1%), gypsum wallboard (0.3%), roofing (0.3%) and miscellaneous materials (0.5%).
- The remaining 4% of the residential waste stream consisted of glass (1%), beverage containers (1%), small appliances (0.6%), household hazardous waste (0.5%), electronic waste (0.1%) and non-sortable fines (small bits of plastic, dirt, food, paper, etc.).

Table 2 shows the composition, by weight and percentage of the curbside residential solid waste stream in the RDN. The percentage column reflects the study results, as shown in Figure 1, while the tonnage column is an extrapolation based on the 2003 rate of disposal.

RDN Solid Waste Composition Study

Table 1. Curbside Residential Waste Composition by Weight

Material Category	Waste Stream Percentage	Estimated Annual Tonnes
Compostables	62.8%	9,582
Food Waste	47.4%	7,236
Yard Waste	10.2%	1,556
Compostable Paper	5.2%	790
Plastic	10.2%	1,557
Other Plastics	5.1%	782
Plastic Film	3.2%	487
Rigid Containers	1.9%	288
Paper	5.9%	907
Old Newsprint (ONP)	2.8%	428
Mixed Paper (MWP)	2.7%	409
Old Corrugated Containers (OCC)	0.5%	70
Metal	3.5%	530
Scrap Metal	1.8%	280
Food Containers	1.6%	250
C&D	3.3%	511
Wood Waste (dirty/coated)	1.3%	193
Wood Waste (clean)	1.1%	162
Misc. CD waste	0.5%	71
Roofing	0.3%	48
Gypsum	0.2%	37
Concrete, Brick, Asphalt	0.0%	-
Glass	1.3%	198
Food Containers	1.0%	150
Non-Container Glass	0.3%	48
Beverage Containers	1.0%	148
Milk containers	0.5%	79
Deposit containers	0.5%	69
HHW	0.5%	81
Non-stewardship Products	0.5%	80
Stewardship Products	0.01%	1
Electronics	0.1%	13
Audio Visual	0.05%	7
Computer	0.04%	6
Miscellaneous	11.4%	1,737
Diapers / Personal Hygiene	6.1%	937
Textiles	4.4%	671
Small Appliances	0.6%	85
Other	0.3%	44
Totals	100.0%	15,264

RDN Solid Waste Composition Study

Figure 2 illustrates some examples of the waste observed in the curbside residential waste stream.

Figure 2. Photos of Curbside Residential Waste



Cedar Curbside Collection Sample

Parkville Curbside Collection Sample



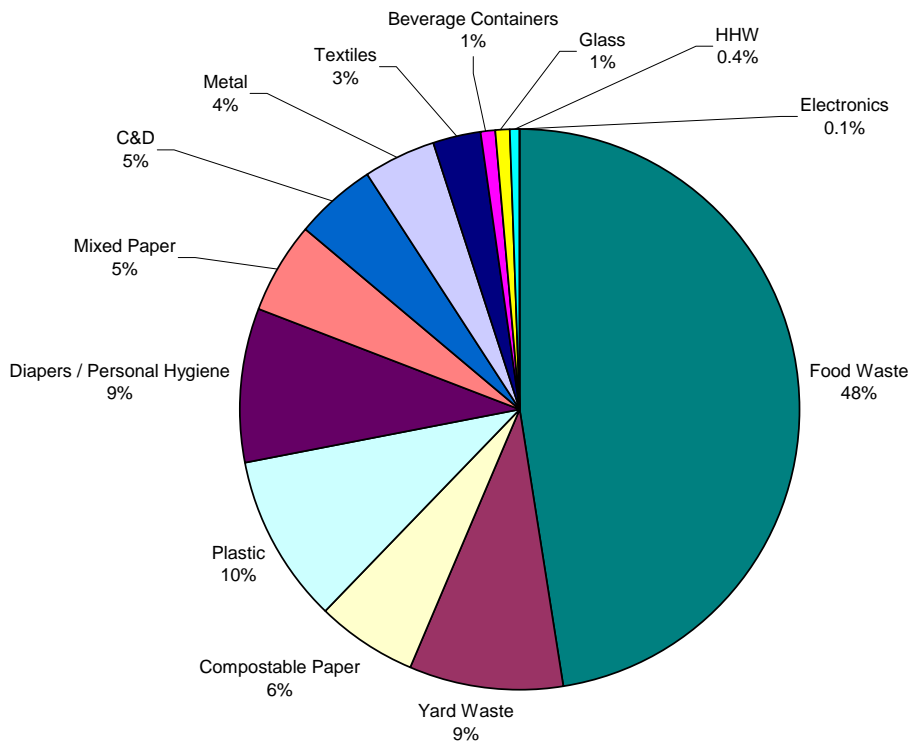
Whiskey Creek Curbside Collection Sample

2.1.1 Regional District of Nanaimo Residential Waste Composition

The composition of the RDN-serviced residential waste stream was determined through examination of three waste samples from RDN garbage trucks at the Regional Landfill representing the communities of Parkville, Whiskey Creek and Cedar. The data from these samples can be found in Appendix A.

Figure 3 illustrates a rough estimate of the composition of the curbside residential solid waste stream in the RDN. As shown, the primary components of the waste stream are compostable food waste (48%), yard waste (9%), compostable paper (6%), plastic (10%), diapers and personal hygiene products (9%), recyclable paper products (5%), construction / demolition waste (5%), metal (4%) and textiles (3%).

Figure 3. RDN Residential Waste Stream Composition



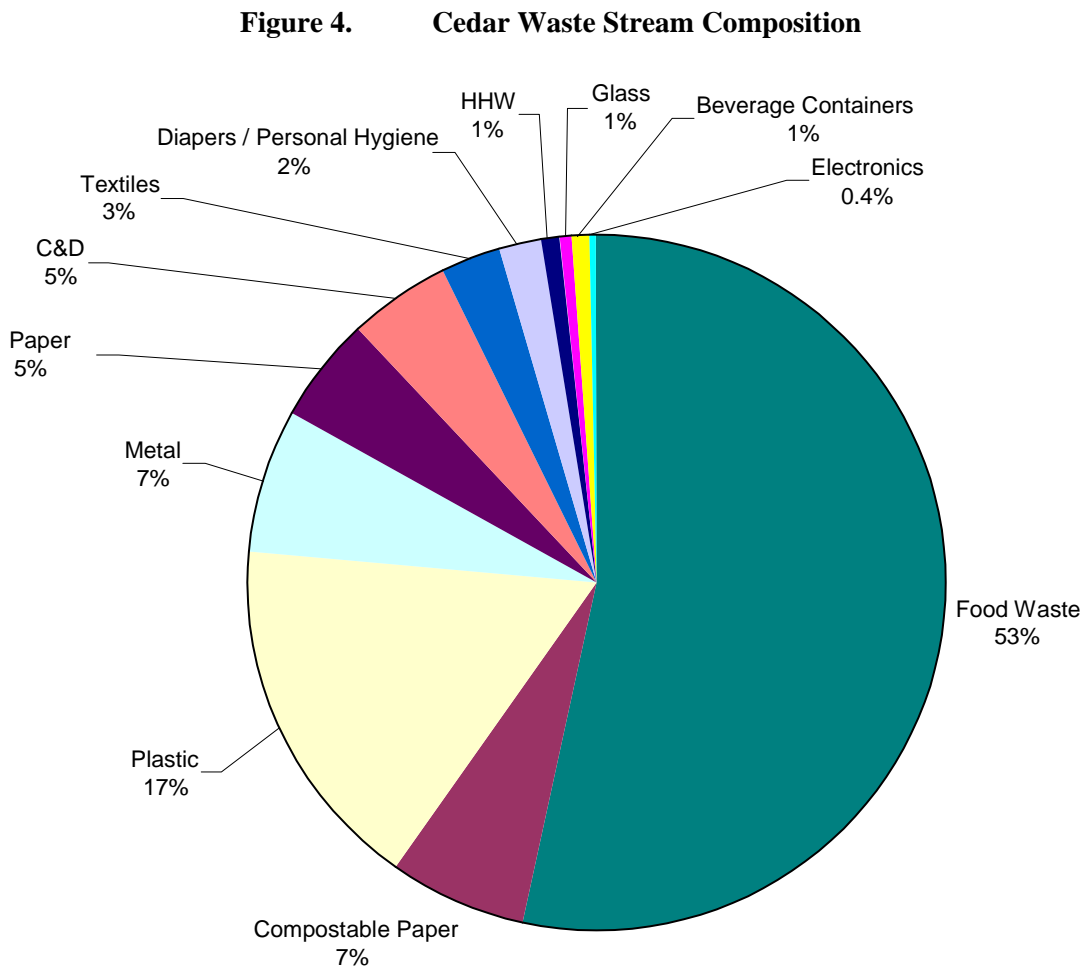
Figures 4 through 8 represent the data generated from sampling the waste generated in specific residential waste collection routes – Cedar, Whiskey Creek, Parkville, Qualicum Beach and Nanaimo. As the data presented is based on only one or two samples of each route, the reader is cautioned that the confidence level of the data for each route is very low. The data only reflects the composition of the residential waste on that given day and does not necessarily reflect the general composition of the waste from these

residential routes. In the case of Nanaimo, the data reflects an amalgamation of three samples from three different routes. Consequently, the confidence in the Nanaimo data is greater than for the communities where only one sample was analyzed.

2.1.2 Cedar Single Family Residential Waste Composition

The composition of a single residential waste collection route in Cedar was determined through sampling of a dedicated garbage truck at the Regional Landfill in Nanaimo. The data from this sample can be found in Appendix A.

Figure 4 illustrates the composition of the residential solid waste stream sample from Cedar. As shown, the primary components of the sample were compostable food waste (53%), compostable paper (7%), plastic (17%), metal (7%), paper (5%), construction / demolition waste (5%), textiles (3%), and diapers / personal hygiene (2%).



RDN Solid Waste Composition Study

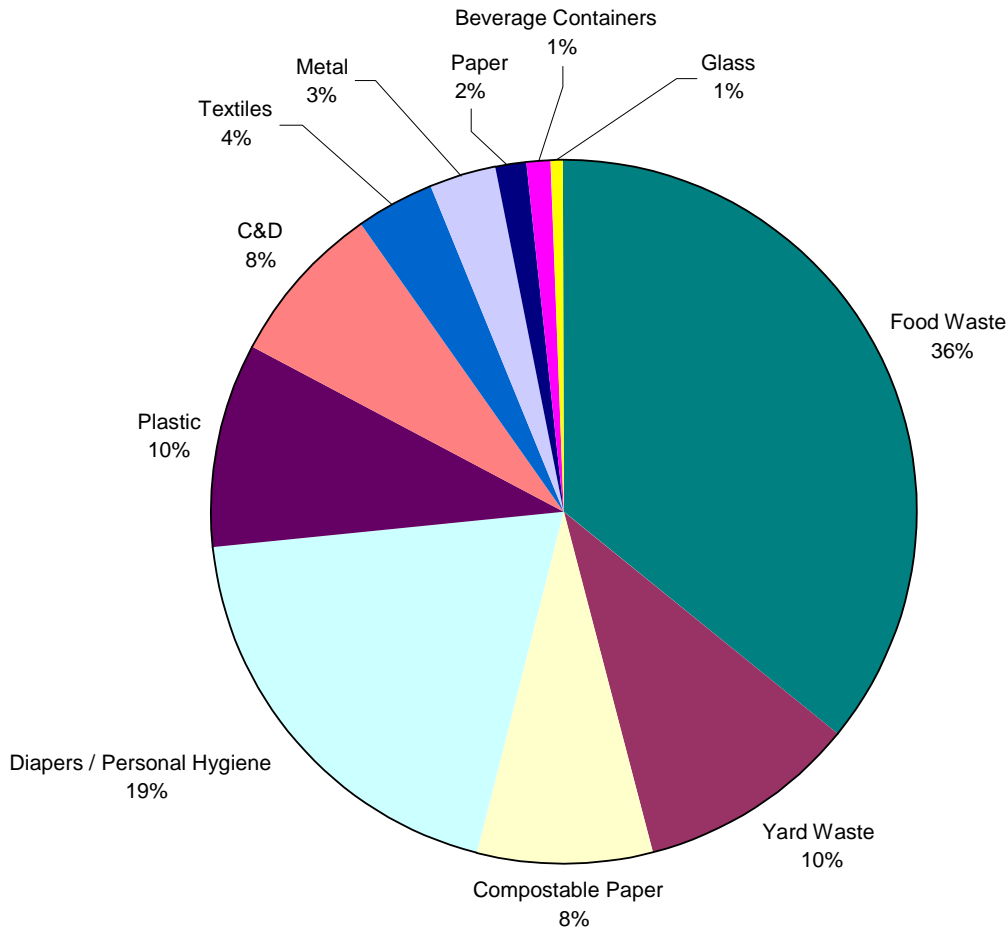
- Compostable materials represented 60% of the Cedar waste collection route sample. This category consisted primarily of household food waste (53%) and compostable paper products such as paper towels and tissues (7%).
- Plastics represented the second largest category (17%). This category consisted primarily of film plastic (7%), non-recyclable mixed plastics (6%); the remainder consisted of and recyclable rigid food containers (4%).
- The metals observed in this sample consisted of scrap metal (5%) and food containers (1.5%).
- The paper (5%) observed consisted of entirely of mixed paper (5%), no cardboard or newsprint was observed in the sample.
- Construction / demolition waste (5%) consisted of entirely of coated /painted wood waste.
- The textiles (3%) observed were clean and reusable; the majority of this category consisted of primarily of old clothing.
- Diapers and personal hygiene products made up (2%) of the Cedar residential solid waste sample.
- The remaining 3% of the sample consisted of household hazardous waste (0.9%), glass (0.8%), beverage containers (0.7%), and electronic waste (0.4%).

2.1.3 Whiskey Creek Single Family Residential Waste Composition

The composition of a single residential waste collection route in Whiskey Creek was determined through sampling of a dedicated garbage truck at the Regional Landfill in Nanaimo⁴. The data from this sample can be found in Appendix A.

Figure 5 illustrates the composition of the residential solid waste sample from Whiskey Creek. As shown, the primary components of the sample were compostable food waste (36%), yard waste (10%), and compostable paper (8%), diapers and personal hygiene (19%), plastic (10%), construction / demolition waste (8%), textiles, (4%), metal (3%) and recyclable paper (2%).

Figure 5. Whiskey Creek Waste Stream Composition



⁴ The waste collection company brought the waste to the landfill for sorting due to the timing of the collection day.

RDN Solid Waste Composition Study

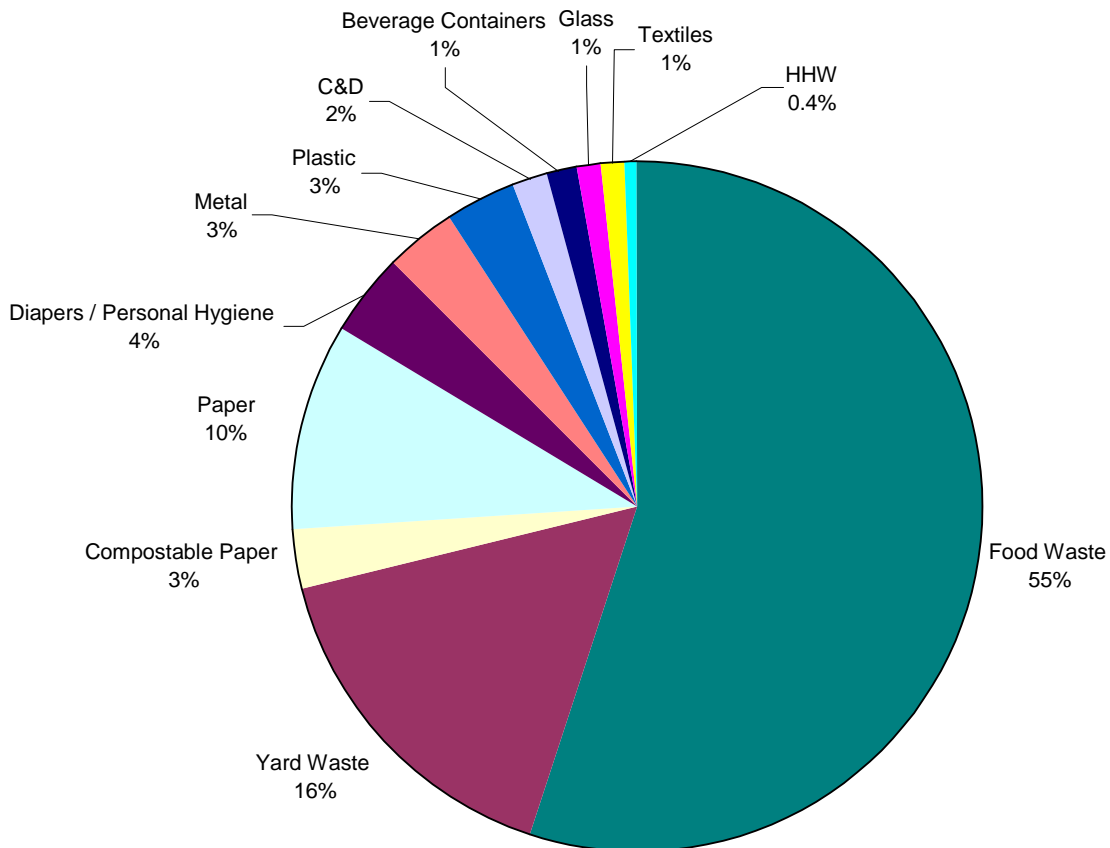
- Compostable materials represented 54% of the residential solid waste sample from Whiskey Creek. This category consisted primarily of household food waste (36%), yard waste (10%) and compostable paper products such as paper towels and tissues (8%).
- Diapers and personal hygiene products represented the second largest category (19%).
- Plastics (10%) consisted primarily of non-recyclable mixed plastics (6%), recyclable rigid food containers (2%) and film plastic (2%).
- Construction / demolition waste (8%) consisted of roofing (3%), miscellaneous materials (2%), gypsum wallboard (2%) and clean wood waste (1%).
- Textiles (4%) observed in this sample were clean and reusable; the majority of this category consisted of clothing, stuffed toys and household items.
- Metals observed consisted of scrap metal (2%) and food containers (2%).
- Recyclable paper (2%) observed consisted of only of newspaper (2%).
- The remaining components of the sample consisted of beverage containers (0.9%) and glass (0.7%).

2.1.4 Parksville Single Family Residential Waste Composition

The composition of a single residential waste collection route in Parksville was determined through sampling of a dedicated load of garbage at the Regional Landfill in Nanaimo.⁵ The data from this sample can be found in Appendix A.

Figure 6 illustrates the composition of the residential solid waste sample from Parksville. As shown, the primary components of the sample were compostable food waste (55%), yard waste (16%), and compostable paper (3%), paper (10%), diapers / personal hygiene (4%), metal (3%) and construction / demolition waste (2%).

Figure 6. Parksville Waste Stream Composition



⁵ The waste collection company brought the Parksville waste to the landfill for sorting due to the collection day for this route.

RDN Solid Waste Composition Study

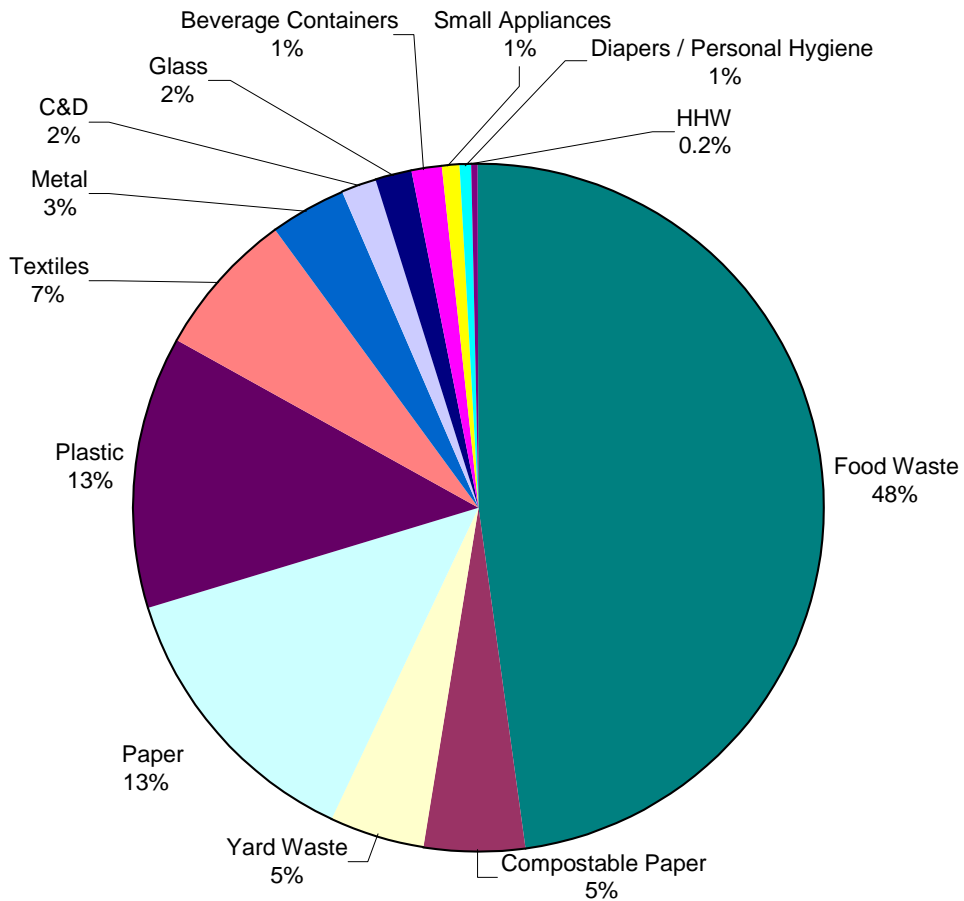
- Compostable materials represented 74% of the residential solid waste sample from Parksville. This category consisted primarily of household food waste (55%), yard waste (16%) and compostable paper products such as paper towels and tissues (3%).
- Recyclable paper products (10%) observed consisted of newspaper (6%), mixed paper (3%), and cardboard boxes (1%).
- Diapers and personal hygiene products made up (4%) of the curbside residential solid waste sample.
- The metals (3%) observed in this sample consisted of food containers (2%) and a small amount of scrap metal (1%).
- The plastics category consisted primarily of film plastic (2%); non-recyclable mixed plastics (1%) and recyclable rigid food containers (1%).
- The remaining components of the sample consisted of construction / demolition waste (2%), beverage containers (1%), glass (1%), textiles (1%), and household hazardous waste (0.4%).

2.1.5 Qualicum Beach Residential Waste Composition

The composition of the residential waste stream in Qualicum Beach was determined through the sampling of two incoming garbage trucks at the Church Road Transfer Station. The data from these samples can be found in Appendix A.

Figure 7 illustrates the composition of the residential solid waste samples from Qualicum Beach. As shown, the primary components of the samples were compostable food waste (48%), compostable paper (5%), yard waste (5%), recyclable paper products (13%), plastic (13%), textiles (7%) and metal (3%).

Figure 7. Qualicum Beach Waste Stream Composition



RDN Solid Waste Composition Study

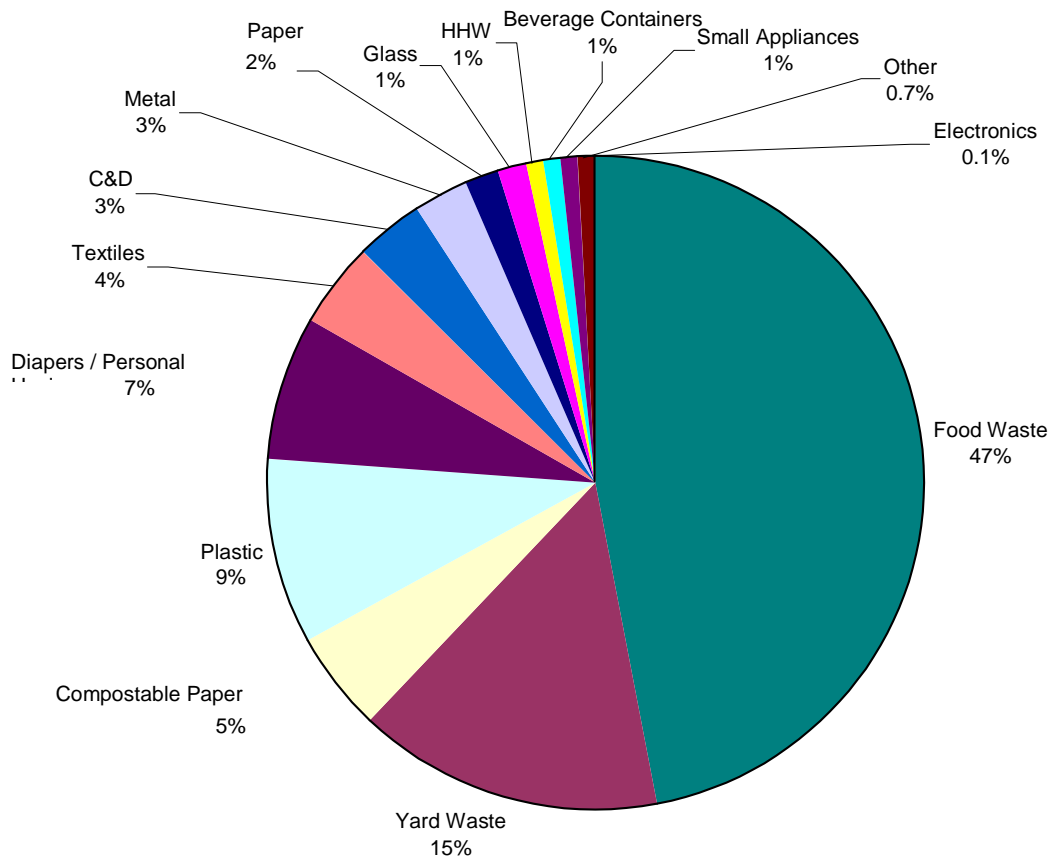
- Compostable materials represented 57% of the Qualicum Beach curbside residential solid waste samples. This category consisted primarily of household food waste (48%), yard waste (5%) and compostable paper products such as paper towels and tissues (5%).
- Recyclable paper (13%) represented the second largest category and consisted of newspaper (7%), mixed paper (5%), and cardboard boxes (1%).
- Plastics (13%) observed consisted primarily of non-recyclable mixed plastics (7%); the remainder consisted of film plastic (4%) and recyclable rigid food containers (2%).
- The textiles (7%) observed in the samples were clean and reusable; the majority of this category consisted of used clothing.
- The metals (3%) observed consisted of scrap metal (2%) and food containers (1%).
- Construction / demolition waste (2%) consisted of coated /painted wood waste (1%) and clean wood waste (0.8%).
- The remaining components were glass (2%), beverage containers (1%), small appliances (0.8%), diapers / personal hygiene (0.7%) and household hazardous waste (0.2%).

2.1.6 City of Nanaimo Residential Waste Composition

The composition of the City of Nanaimo residential waste stream was determined through examination of three 125 kg samples from City of Nanaimo garbage trucks at the Regional Landfill. The data from these samples can be found in Appendix A.

Figure 8 illustrates a rough estimate of the composition of the curbside residential solid waste stream in the City of Nanaimo. As shown, the primary components of the waste stream are compostable food waste (47%), yard waste (15%), compostable paper (5%), plastic (9%), diapers and personal hygiene products (7%), textiles (4%), construction / demolition waste (3%), metal (3%), and paper (2%).

Figure 8. City of Nanaimo Residential Waste Stream Composition



RDN Solid Waste Composition Study

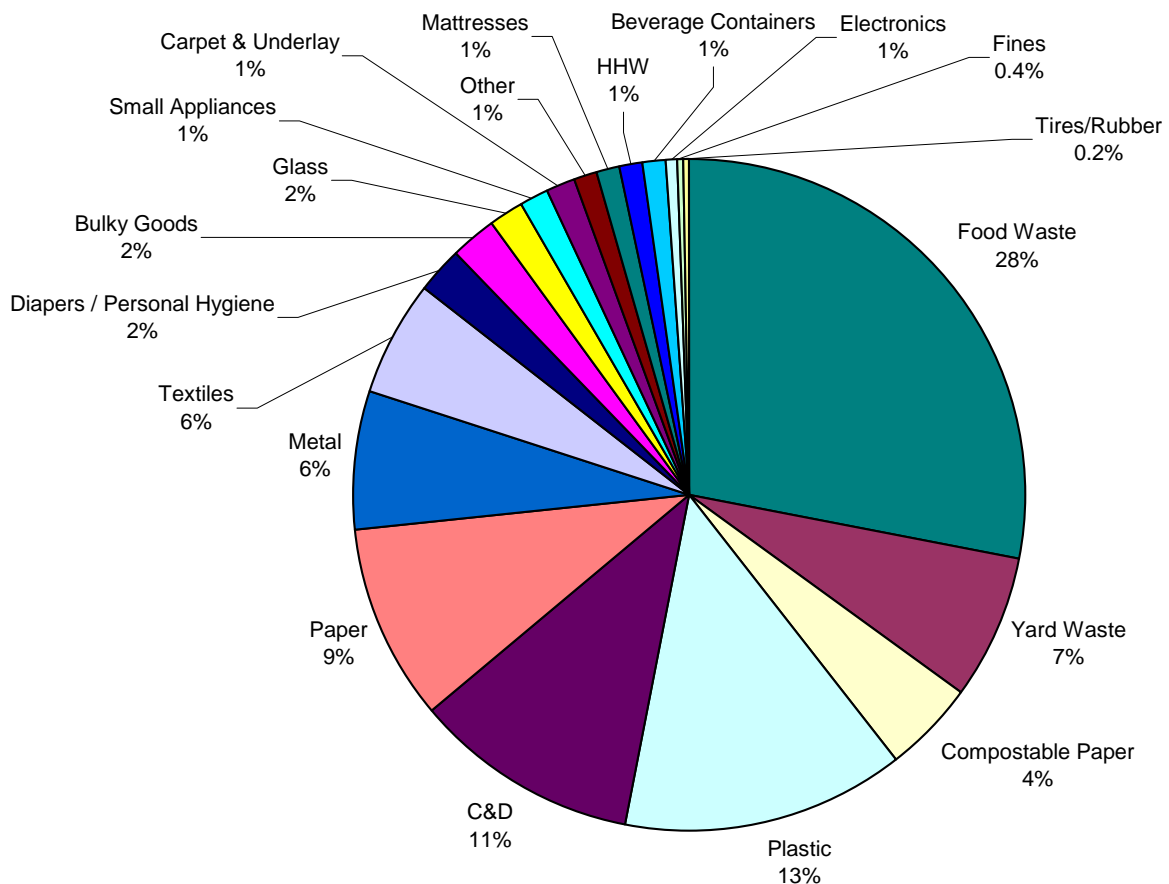
- Compostable materials represented 67% of the Nanaimo curbside residential solid waste samples. This category consisted primarily of household food waste (47%), yard waste (15%) and compostable paper products such as paper towels and tissues (5%).
- Plastics represented the second largest category (9%). This category consisted primarily of non-recyclable mixed plastics (5%); the remainder consisted of film plastic (3%) and recyclable rigid food containers and (2%).
- Diapers and personal hygiene products made up (7%) of the samples.
- The textiles (4%) observed during in these samples were clean and reusable; the majority of this category consisted of clothing, stuffed toys and household items.
- Construction / demolition waste (3%) consisted of clean wood waste (2%) and coated /painted wood waste (1%).
- The metals (3%) observed in the Nanaimo residential samples consisted of food containers (2%) and scrap metal (1%).
- Recyclable paper (2%) observed consisted of mixed paper (1%), newspaper (0.4%), and cardboard boxes (0.1%).
- The remaining 4% consisted of glass (1%), household hazardous waste (0.9%), beverage containers (0.8%), small appliances (0.8%) and electronics (0.1%).

2.2 Industrial, Commercial, Institutional Solid Waste Stream

The composition of the Industrial, Commercial and Institutional (ICI) solid waste stream in the RDN was determined by examining solid waste samples from front-load trucks and commercial compactors at the Regional Landfill and the Church Road Transfer Station. This waste stream includes waste from multi-family residential dwellings (e.g. apartment buildings).

Figure 9 shows the estimated composition of the ICI solid waste stream. The primary components of the ICI waste stream are compostable food waste (28%), yard waste (7%), compostable waste paper (4%), plastic (13%), construction / demolition waste (11%), recyclable paper (9%), metal (6%) and textiles (6%).

Figure 9. ICI Solid Waste Stream Composition



RDN Solid Waste Composition Study

- Compostable materials represented 40% of the ICI solid waste stream. This category consisted primarily of grocery store, restaurant and some household food waste (28%), yard waste (7%) and compostable paper products such as food wrappings, paper towels and tissues (4%).
- Construction / demolition waste (11%) represented the second largest category. This category consisted of coated /painted wood waste (5%), clean wood waste (2%), gypsum wallboard (3%), roofing and miscellaneous materials (<1%).
- Plastics (13%) consisted primarily of non-recyclable mixed plastics (7%), film plastic (4%) and recyclable rigid food containers (2%).
- Recyclable paper products (9%) observed consisted of mixed paper (4%), newspaper (2%), and cardboard boxes (2%).
- The metals observed in the ICI sector consisted primarily of scrap metal (6%) and food containers (0.8%).
- The textiles (6%) observed were clean and reusable; the majority of this category consisted of used clothing.
- The remaining components of the ICI waste stream consisted of bulky goods (2%), glass (2%), carpet and underlay (1%), diapers and personal hygiene (2%), mattresses (1%), beverage containers (1%), household hazardous waste (1%), small appliances (1.4%), and rubber (0.2%).

Table 2 provides the composition by weight and percentage of the ICI waste stream in the RDN. The percentage column reflects the results from the study, while the tonnage column is an extrapolation based on the 2003 rate of disposal. Detailed data sheets can be found in Appendix A.

RDN Solid Waste Composition Study

Table 2. ICI Solid Waste Stream Composition

Waste Material	Percentages	Annual Tonnes
Compostables	39.5%	12,297
Food Waste	28.1%	8,758
Yard Waste	6.9%	2,151
Compostable Paper	4.5%	1,387
Plastic	13.4%	4,170
Other Plastics	7.3%	2,269
Plastic Film	3.7%	1,160
Rigid Containers	2.4%	742
Paper	9.4%	2,930
Mixed Paper (MWP)	4.9%	1,537
Old Corrugated Containers (OCC)	2.1%	642
Old Newsprint (ONP)	2.4%	751
C&D	11.1%	3,443
Wood Waste (dirty/coated)	4.5%	1,410
Wood Waste (clean)	1.8%	561
Gypsum	3.0%	922
Misc. CD Waste & Roofing	1.8%	550
Metal	6.5%	2,022
Scrap Metal	5.7%	1,788
Food Containers	0.8%	241
Glass	1.8%	548
Non-Container Glass	1.0%	307
Food Containers	0.8%	241
Beverage Containers	1.0%	307
Deposit containers	0.7%	223
Milk containers	0.3%	84
HHW	1.1%	334
Non-stewardship Products	0.4%	110
Stewardship Products	0.7%	224
Miscellaneous	15.7%	4,878
Textiles	5.5%	1,723
Bulky Goods	2.2%	671
Other	1.2%	376
Carpet & Underlay	1.3%	404
Diapers / Personal Hygiene	2.3%	710
Mattresses	1.2%	368
Small Appliances	1.4%	433
Rubber/Tires	0.2%	61
Totals	100.0%	31,119

RDN Solid Waste Composition Study

Figure 10 illustrates some examples of the waste observed in the ICI waste stream.

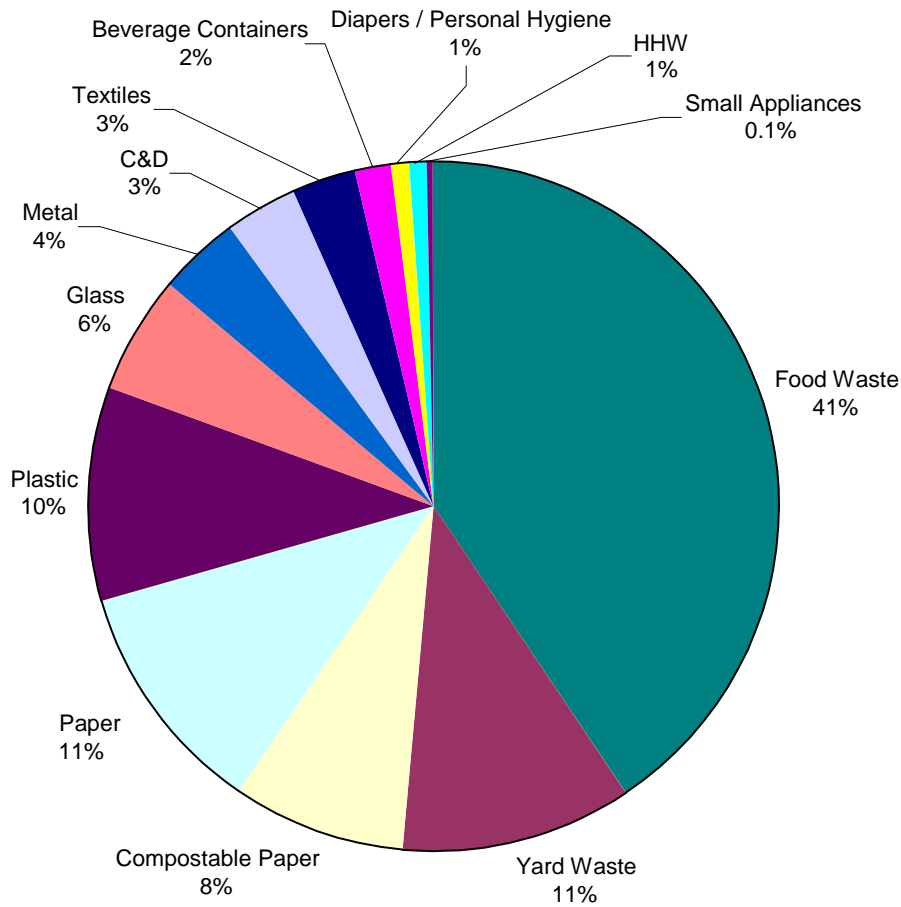
Figure 10. Photos of ICI Waste



2.2.1 Multi-Family Waste Composition

Multi-family waste is considered part of the ICI waste stream since it is not collected as part of the municipal residential waste collection programs in the regional district. It is generally collected through a private commercial waste collection company that also services local businesses and institutions. A rough estimate of the composition of the multi-family (MF) solid waste stream in the RDN was determined by examining two dedicated solid waste samples from multi-family buildings. Like the analysis of the specified single-family collection routes, the small number of samples may not be representative of the composition of waste from this type of waste generator. The data in this section should be considered more of a reflection of the composition of the two loads, rather than the whole multi-family waste stream. Figure 11 shows the composition of the MF solid waste samples. The primary components of the MF waste stream are compostables (60%), recyclable paper products (11%), plastic (10%), glass (6%), metal (4%) and construction / demolition waste (3%).

Figure 11. Multi-Family Solid Waste Composition



RDN Solid Waste Composition Study

- Compostable materials represented 60% of the multi-family residential solid waste samples. This category consisted primarily of household food waste (41%), yard waste (11%) and compostable paper products such as paper towels and tissues (8%).
- Recyclable paper products (11%) represented the second largest category and consisted of mixed paper (5%), newspaper (5%), and cardboard boxes (1%).
- Plastics (10%) consisted primarily of non-recyclable mixed plastics (4%); recyclable rigid food containers (3%), the remainder consisted of film plastic (2%).
- Glass food containers and non-container glass each represented 3% of the MF solid waste sample.
- The metals (4%) observed consisted of scrap metal (3%) and food containers (1%).
- Construction / demolition waste (4%) consisted of coated /painted wood waste (3%), roofing and miscellaneous materials (<1%).
- The textiles (3%) observed were clean and reusable; the majority of this category consisted of clothing, stuffed toys and household items.
- The remaining components of the MF solid waste samples consisted of beverage containers (2%), diapers / personal hygiene (1%), household hazardous waste (0.9%) and small appliances (0.1%).

Figure 12 illustrates the multi-family loads that were examined.

Figure 12. Photos of Multi-Family Residential Solid Waste

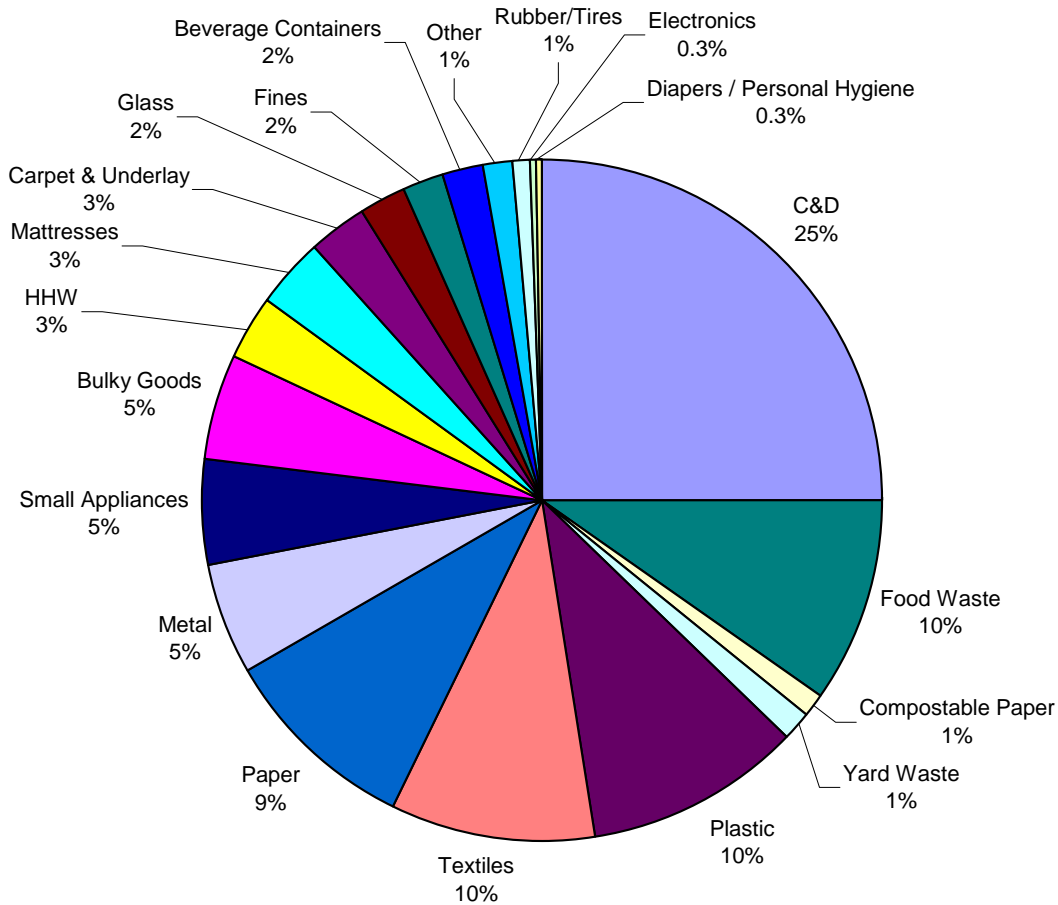


2.3 Self-Haul Solid Waste Stream

The composition of the self-haul waste stream in the RDN was determined through the taking of samples from the self-haul bins at the landfill and through sorting incoming loads of self-haul waste at the Church Road Transfer Station.

Figure 13 shows that the primary components of the self-haul waste stream samples consisted of construction / demolition waste (25%), compostable materials (12%), plastic (10%), textiles (10%), recyclable paper products (9%), metal (5%) and small appliances (5%).

Figure 13. Self-Haul Waste Stream Composition



RDN Solid Waste Composition Study

- In the self-haul samples observed, construction / demolition waste (25%) made up the largest component of the solid waste stream. This category consisted of gypsum wallboard (11%), roofing materials (5%), coated /painted wood waste (4%), clean wood waste (3%), concrete, brick and asphalt (0.9%) and miscellaneous materials (<1%).
- Compostable materials represented 12% of the self-haul solid waste stream. This category consisted primarily of household food waste (10%), yard waste (1%) and compostable paper products such as paper towels and tissues (1%).
- Plastics (10%) consisted primarily of non-recyclable mixed plastics (6%); recyclable rigid food containers (3%), the remainder consisted of film plastic (1%).
- The textiles (10%) observed during the study were clean and reusable; the majority of this category consisted of clothing, stuffed toys and household textiles.
- Recyclable paper (9%) consisted of mixed paper (5%), cardboard boxes (3%) and newspaper (2%).
- The metals (5%) observed consisted primarily of scrap metal (5%) and a small amount of food containers (<1%).
- Small appliances made up 5% of the self-haul waste stream and consisted of items such as coffee-makers and toasters.
- Bulky goods represented 5% of this waste stream, and consisted mainly of old furniture.
- Household hazardous waste observed consisted of 3% of the sample, the largest concentration in the study. The primary components were stewardship products such as paint cans and oil bottles.
- The remaining components of the self-haul waste stream consisted of mattresses (3%), carpet and underlay (3%), glass (2%), fines (2%) and beverage containers (2%).

Table 3 presents the composition, by weight and percentage of the self-haul solid waste stream in the RDN. The percentage column reflects the results from the study, while the tonnage column is an extrapolation based on the 2003 rate of disposal. Detailed data sheets can be found in Appendix A.

RDN Solid Waste Composition Study

Table 3. Self-Haul Solid Waste Stream Composition

Waste Material	%	Annual Tonnes
Paper	1.4%	794
Old Newsprint (ONP)	0.3%	142
Old Corrugated Containers (OCC)	0.4%	236
Mixed Paper (MWP)	0.8%	416
Glass	0.3%	184
Food Containers	0.1%	62
Non-Container Glass	0.2%	122
Metal	0.8%	462
Food Containers	0.1%	38
Scrap Metal	0.8%	424
Plastic	1.6%	875
Rigid Containers	0.5%	261
Plastic Film	0.2%	96
Other Plastics	0.9%	518
Beverage Containers	0.3%	166
Deposit containers	0.3%	152
Milk containers	0.0%	14
Compostables	1.9%	1,035
Food Waste	1.5%	825
Yard Waste	0.2%	97
Compostable Paper	0.2%	113
HHW	0.5%	274
Stewardship Products	0.5%	258
Non-stewardship Products	0.0%	16
C&D	3.9%	2,125
Wood Waste (clean)	0.5%	274
Wood Waste (dirty/coated)	0.7%	373
Gypsum	1.7%	937
Concrete, Brick, Asphalt	0.1%	75
Roofing	0.7%	389
Misc. CD waste	0.1%	78
Electronics	0.1%	30
Audio Visual	0.1%	30
Computer	0.0%	-
Miscellaneous	4.7%	2,574
Carpet & Underlay	0.4%	247
Mattresses	0.5%	268
Small Appliances	0.8%	432
Textiles	1.5%	842
Rubber/Tires and Bulky Goods	0.8%	478
Diapers / Personal Hygiene	0.1%	29
Fines and Other	0.5%	274
Totals	15.5%	8,518

RDN Solid Waste Composition Study

Figure 14 illustrates examples of the self-haul loads that were examined.

Figure 14. Photos of Self-Haul Waste

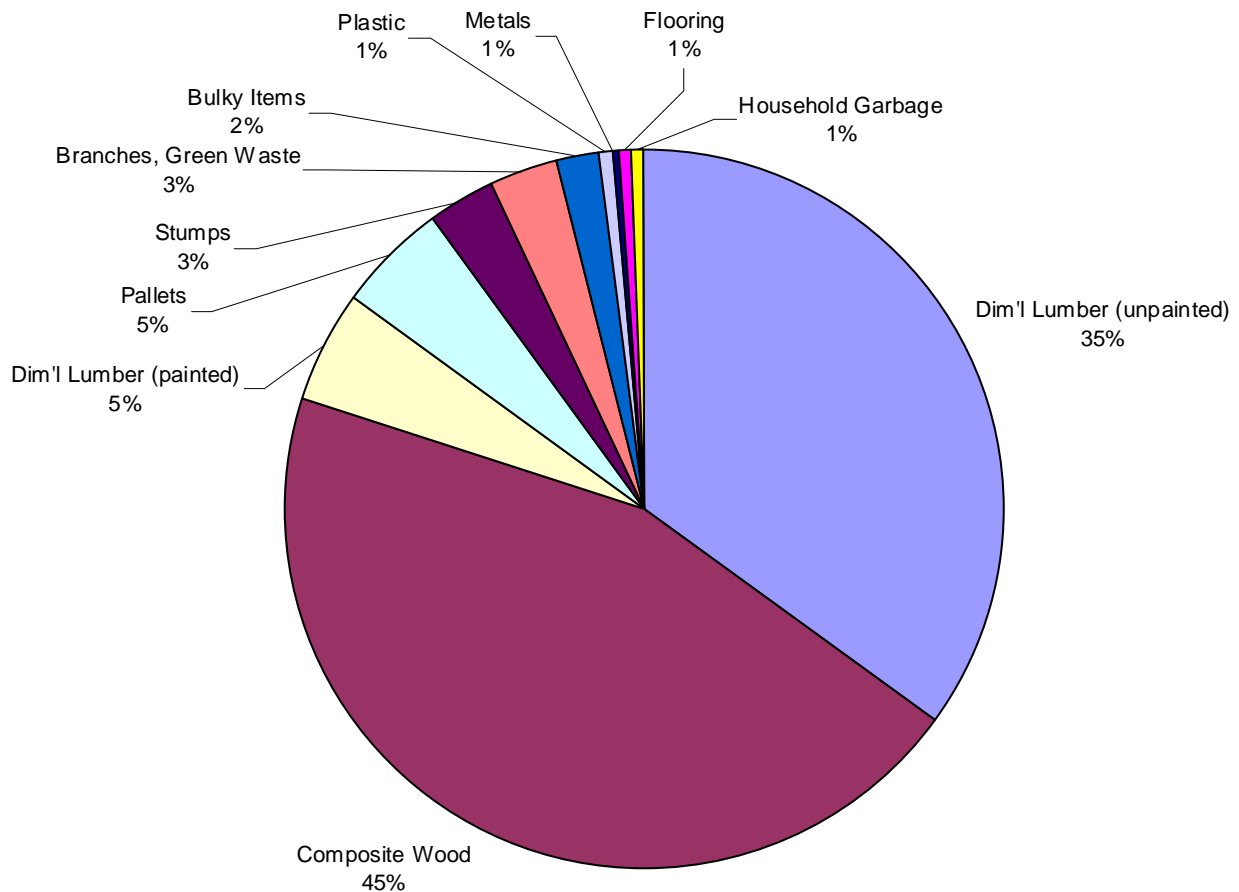


2.4 Construction / Demolition Solid Waste Stream

The composition of the construction / demolition (CD) waste stream in the RDN was determined through the visual examination of the construction waste pile at the Regional Landfill. This segregated waste stream is screened by landfill staff to remove non-grindable materials such as wire, metal, and glass. The visual composition analysis was conducted on the post-screening CD waste pile.

Figure 15 shows that 45% of the CD waste stream consisted of composite wood products. The second largest component of the CD waste stream was clean wood waste (35%). Painted wood waste (5%), pallets (5%), stumps (3%), branches / green waste (3%), bulky items (2%), plastic (0.5%), metal (0.5%), flooring (0.5%) and household garbage (0.5%) made up the remaining components,

Figure 15. Construction / Demolition Waste Stream Composition



RDN Solid Waste Composition Study

Table 4 presents the composition, by weight and percentage of the construction / demolition solid waste stream in the RDN. The percentage column reflects the results from the study, while the tonnage column is an extrapolation based on the 2003 rate of disposal⁶. Detailed data sheets can be found in Appendix A.

Table 4. CD Solid Waste Stream by Weight

Material Category	Waste Stream Percentage	Estimated Annual Tonnes
Composite Wood	45%	1,591
Dimensional Lumber (unpainted)	35%	2,045
Dimensional Lumber (painted)	5%	227
Pallets	5%	227
Stumps	3%	136
Branches, Green Waste	3%	136
Bulky Items	2%	91
Plastic	0.5%	23
Metals	0.5%	23
Flooring	0.5%	23
Household Garbage	0.5%	23
Totals	100.0%	4,545

Figure 16 illustrates the construction / demolition waste that was examined.

Figure 16. Photo of CD Waste at Regional Landfill



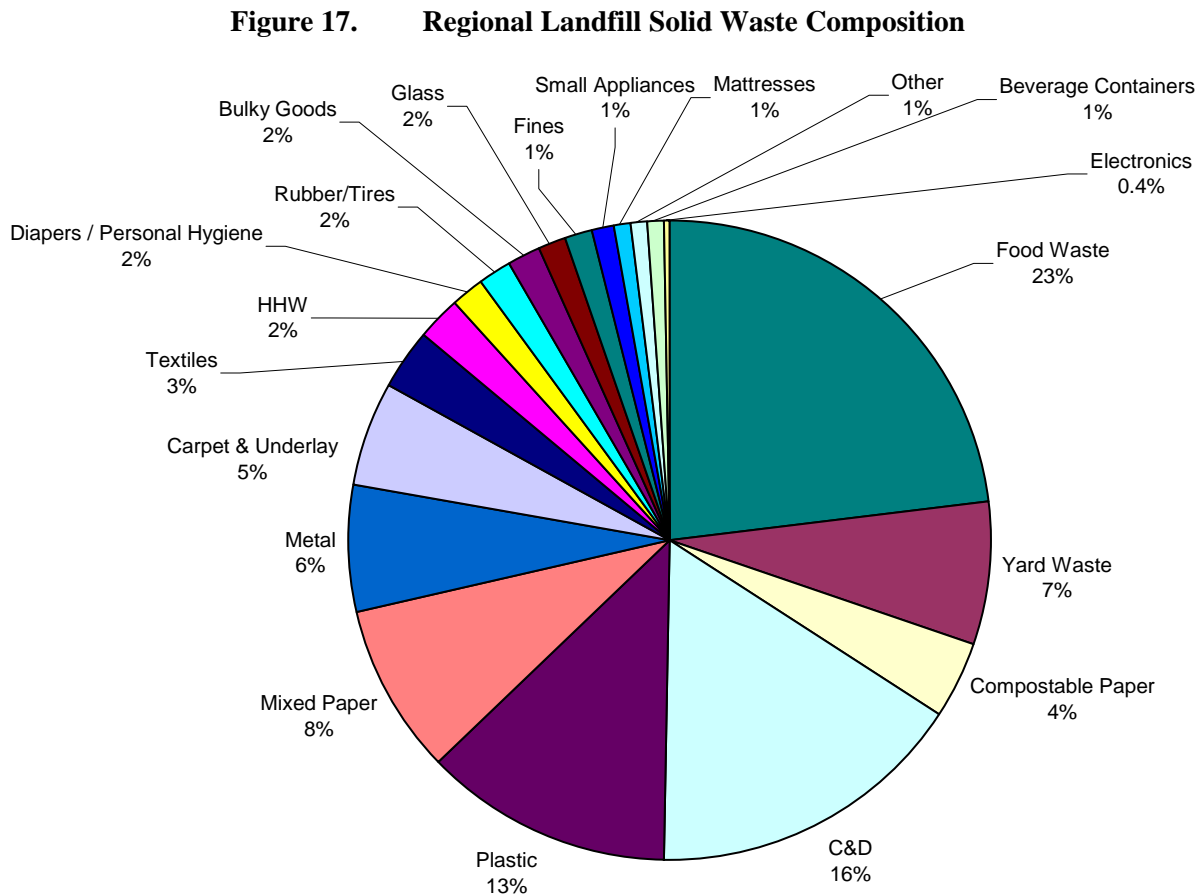
⁶ Usually, a direct correlation of volume estimates to weight cannot be done. However, because the CD stream is mainly wood waste, the CD waste stream can be deemed to have a single volume to weight ratio, allowing for the extrapolation seen in Table 5.

2.5 RDN Solid Waste Composition

The composition of the solid waste stream in the RDN was determined by combining the waste composition data from each disposal facility for each of the waste generation sectors (residential, self-haul and ICI). Because CD waste is handled separately from municipal solid waste, the results of the visual audit of the CD waste pile are not included in the overall waste composition. Study findings for the Regional Landfill and Transfer Station are presented first; this information is followed by a summary of data for the entire regional district.

2.5.1 Regional Landfill Solid Waste Composition

The composition of the solid waste stream disposed at the landfill was determined by combining the waste composition data for each of the waste generation sectors (residential, ICI, self-haul and CD) disposing of solid waste in the landfill. The data indicate that the largest components of the waste, by weight, are compostables (34%), construction / demolition waste (16%), plastic (13%), recyclable paper products (8%) and metal (6%). Figure 17 illustrates the composition of the Regional Landfill.



RDN Solid Waste Composition Study

- Compostable materials represented 34% of the regional landfill municipal solid waste stream. This category consisted primarily of food waste (23%), yard waste (7%) and compostable paper products such as paper towels and tissues (4%).
- Construction / demolition waste (16%) represented the second largest category and consisted of clean wood waste (6%), coated /painted wood waste (4%), concrete, brick and asphalt (3%), gypsum (2%), roofing and miscellaneous materials (1.5%).
- Plastics (13%) consisted primarily of non-recyclable mixed plastics (7%), film plastic (4%), the remainder consisted of recyclable rigid food containers (3%).
- Recyclable paper products (8%) consisted of mixed paper (5%), cardboard boxes (2%) and newspaper (>2%).
- The metals (6%) observed in this waste sector consisted of scrap metal (6%) and food containers (>1%).
- Carpet and underlay represented 5% of the waste stream.
- The textiles (3%) observed during the study were clean and reusable; the majority of this category consisted of clothing, stuffed toys and household items.
- Household hazardous waste made up 2% of the landfill's solid waste stream. This category consisted of 1.1% non-stewardship products and (>1%) stewardship products such as used paint and oil.
- Diapers and personal hygiene products represented 2% of the waste stream at this facility.
- The remaining components of the regional landfill solid waste stream consisted of rubber (1.7%), bulky goods (1.6%), glass (1.6%), fines (1.2%), small appliances (1.1%), mattresses (1%), other (0.9%), beverage containers (0.6%) and electronics (0.4%).

RDN Solid Waste Composition Study

Table 5 presents the composition of the solid waste stream in the Regional Landfill, by percentage and weight. The percentage composition is based on the results of the waste composition study, while the weight is extrapolated from the 2003 annual waste disposed.

Table 5. Regional Landfill Solid Waste Stream by Weight

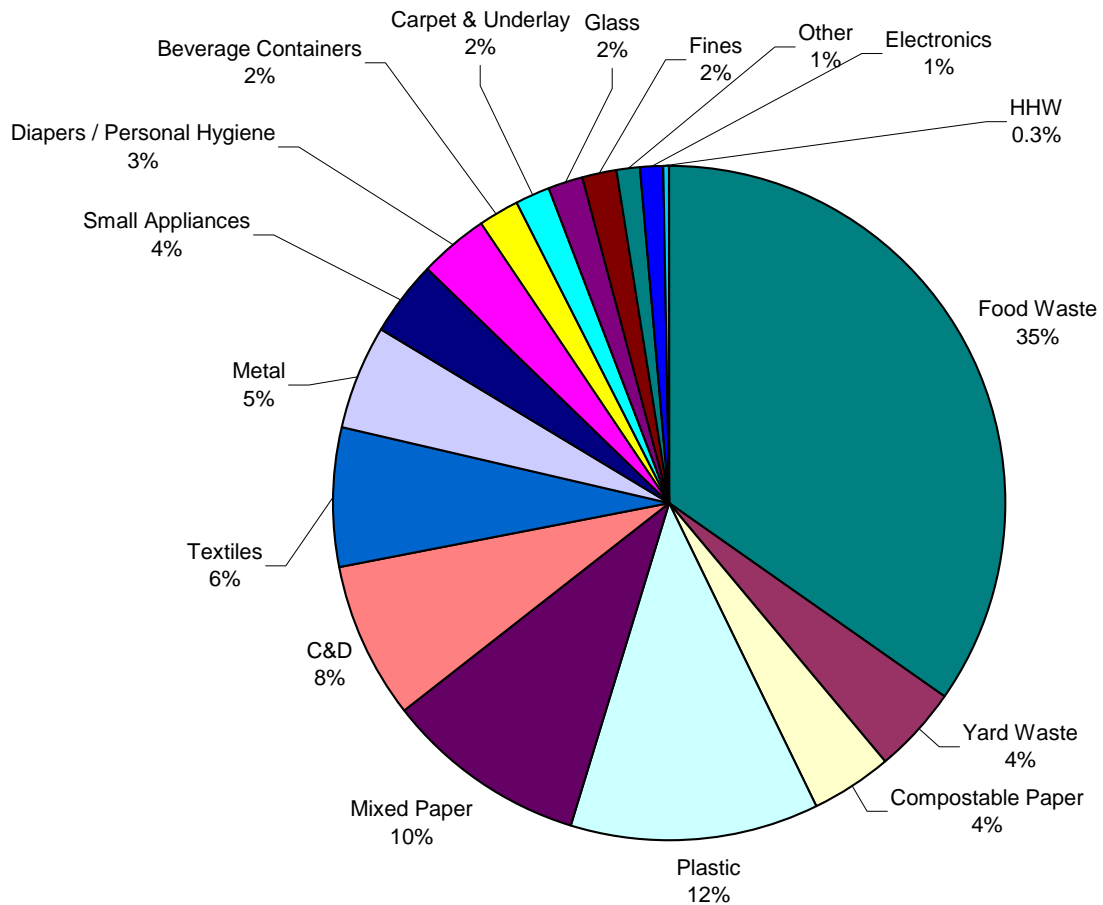
Waste Material	Waste Stream Percentage	2003 Tonnes
Food Waste	23.1%	9,043
Yard Waste	7.1%	2,766
Compostable Paper	3.9%	1,534
C&D	16.2%	6,332
Plastic	12.5%	4,895
Mixed Paper	8.4%	3,295
Metal	6.3%	2,479
Carpet & Underlay	5.4%	2,120
Textiles	3.1%	1,228
HHW	2.0%	773
Diapers / Personal Hygiene	1.7%	663
Rubber/Tires	1.7%	661
Bulky Goods	1.6%	640
Glass	1.6%	634
Fines	1.2%	481
Small Appliances	1.1%	434
Mattresses	1.0%	380
Other	0.9%	338
Beverage Containers	0.6%	218
Electronics	0.4%	162
Totals	100%	39,076

2.5.2 Church Road Transfer Station Solid Waste Composition

The composition of the solid waste stream at the Church Road Transfer Station (CRTS) was determined by combining the waste composition data for each of the waste generation sectors (residential, ICI, self-haul and CD) disposing of solid waste at CRTS. The data indicate that the largest components of the waste stream, by weight, are compostables (43%), plastic (12%), recyclable paper products (10%), construction demolition waste (8%), textiles (6%) and metal (5%).

Figure 18 illustrates the estimated composition of the solid waste stream received for disposal at the Church Road Transfer Station.

Figure 18. Church Road TS Solid Waste Composition



RDN Solid Waste Composition Study

- Compostable materials represented 43% of the municipal solid waste stream sampled at CRTS. This category consisted primarily of food waste (35%), yard waste (4%) and compostable paper products such as paper towels and tissues (4%).
- Plastics (12%) represented the second largest category and consisted primarily of non-recyclable mixed plastics (6%); film plastic (3%), the remainder consisted of recyclable rigid food containers (3%).
- Recyclable paper products (10%) consisted of newspaper (4%), mixed paper (4%), and cardboard boxes (2%).
- Construction / demolition waste (8%) consisted of clean wood waste (3%), coated /painted wood waste (3%), roofing and miscellaneous materials (2%).
- The textiles (6%) observed during the study at CRTS were clean and reusable; the majority of this category consisted of clothing, stuffed toys and household textiles.
- The metals (5%) observed in this waste sector consisted of scrap metal (4%) and food containers (1%).
- Small appliances represented 4% of this solid waste stream.
- Diapers and personal hygiene products represented 3.1%.
- Beverage containers represented (2%) of the solid waste stream at CRTS, deposit containers (1.6%) and dairy containers (0.4%).
- Carpet and underlay represented 1.8%.
- The glass category (1.6%) consisted of food containers (1.1%) and non-container glass (0.6%).
- The remaining components of CRTS solid waste stream consisted of fines (1.6%), other (1.2%), electronics (1%) and household hazardous waste (0.3%).

RDN Solid Waste Composition Study

Table 6 presents the composition of the solid waste stream at the Church Road Transfer Station, by percentage and weight. The percentage composition is based on the results of the waste composition study, while the weight is extrapolated from the 2003 annual waste disposed.

Table 6. Church Road Transfer Station Solid Waste Composition

Waste Material	Waste Stream Percentage	Estimated Annual Tonnes
Food Waste	34.6%	5,482
Yard Waste	4.3%	687
Compostable Paper	3.9%	615
Plastic	12.0%	1,896
Mixed Paper	9.5%	1,507
C&D	7.7%	1,215
Textiles	6.4%	1,020
Metal	5.0%	790
Small Appliances	3.9%	610
Diapers / Personal Hygiene	3.1%	487
Beverage Containers	2.0%	312
Carpet & Underlay	1.8%	290
Glass	1.6%	260
Fines	1.6%	260
Other	1.2%	194
Electronics	1.0%	160
HHW	0.3%	51
Totals	100%	15,825

2.5.3 Regional District Solid Waste Composition

The composition of the municipal solid waste stream in the Regional District of Nanaimo was determined by combining the waste composition data from each disposal facility for each of the waste generation sectors (residential, ICI, and self-haul)⁷. The data indicate that the largest components of the waste stream, by weight, are compostables (42%), plastic (12%), construction/demolition waste (11%), recyclable paper products (8%), textiles (6%) and metal (5%).

Figure 19 illustrates the estimated composition of the municipal solid waste stream in the Regional District of Nanaimo.

Figure 19. RDN Solid Waste Composition

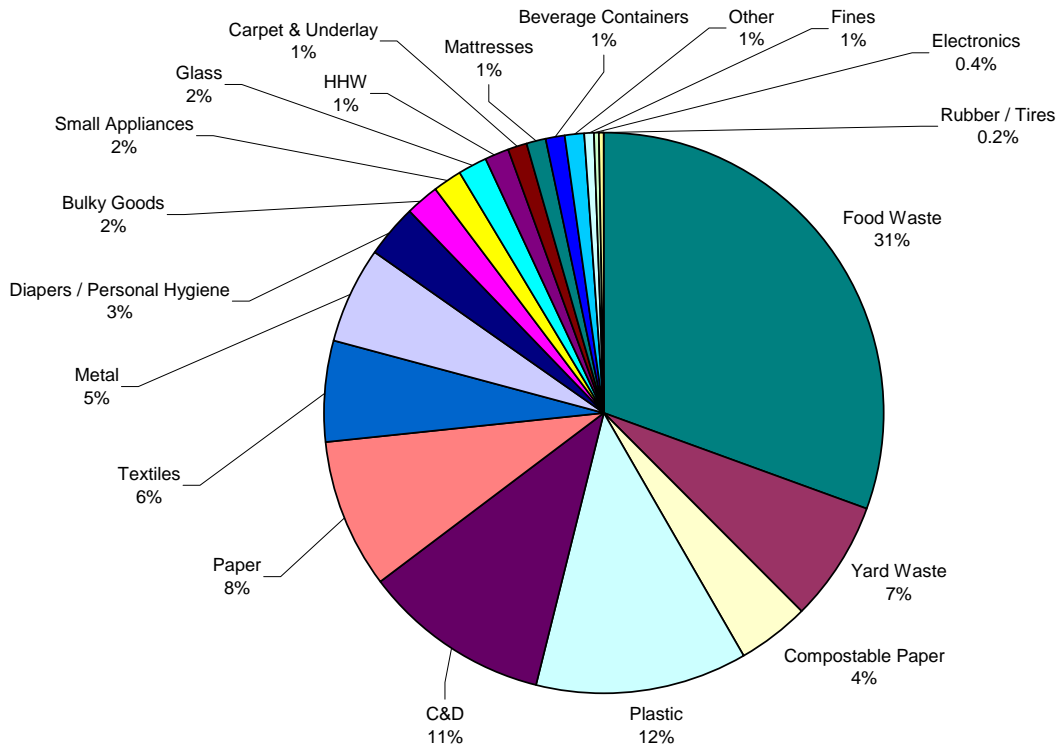


Table 7 presents the composition of the solid waste stream in the Regional District of Nanaimo, by percentage and weight. The percentage composition is based on the results of the waste composition study, while the weight is extrapolated from the 2003 annual waste disposed.

⁷ The CD waste stream is not included in the estimate of overall composition.

RDN Solid Waste Composition Study

Table 7. RDN Solid Waste Composition

Waste Material	Residential		ICI		Self Haul		Estimated Annual Tonnes	Waste Stream Percentage
	Annual Tonnes	Percentage	Annual Tonnes	Percentage	Annual Tonnes	Percentage		
Paper	907	1.7%	2,930	5.3%	794	1.4%	4,631	8.4%
Old Newsprint (ONP)	428	0.8%	751	1.4%	142	0.3%	1,321	2.4%
Old Corrugated Containers (OCC)	70	0.1%	642	1.2%	236	0.4%	948	1.7%
Mixed Paper (MWP)	409	0.7%	1,537	2.8%	416	0.8%	2,363	4.3%
Glass	198	0.4%	548	1.0%	184	0.3%	929	1.7%
Food Containers	150	0.3%	241	0.4%	62	0.1%	452	0.8%
Non-Container Glass	48	0.1%	307	0.6%	122	0.2%	477	0.9%
Metal	530	1.0%	2,022	3.7%	462	0.8%	3,014	5.5%
Food Containers	250	0.5%	234	0.4%	38	0.1%	521	0.9%
Scrap Metal	280	0.5%	1,788	3.3%	424	0.8%	2,492	4.5%
Plastic	1,557	2.8%	4,170	7.6%	875	1.6%	6,602	12.0%
Rigid Containers	288	0.5%	742	1.4%	261	0.5%	1,290	2.3%
Plastic Film	487	0.9%	1,160	2.1%	96	0.2%	1,743	3.2%
Other Plastics	782	1.4%	2,269	4.1%	518	0.9%	3,570	6.5%
Beverage Containers	148	0.3%	307	0.6%	166	0.3%	622	1.1%
Deposit containers	69	0.1%	223	0.4%	152	0.3%	445	0.8%
Milk containers	79	0.1%	84	0.2%	14	0.0%	177	0.3%
Compostables	9,582	17.5%	12,297	22.4%	1,035	1.9%	22,914	41.7%
Food Waste	7,236	13.2%	8,758	16.0%	825	1.5%	16,820	30.6%
Yard Waste	1,556	2.8%	2,151	3.9%	97	0.2%	3,804	6.9%
Compostable Paper	790	1.4%	1,387	2.5%	113	0.2%	2,290	4.2%
HHW	81	0.1%	334	0.6%	274	0.5%	688	1.3%
Stewardship Products	1	0.0%	224	0.4%	258	0.5%	483	0.9%
Non-stewardship Products	80	0.1%	110	0.2%	16	0.0%	206	0.4%
C&D	511	0.9%	3,443	6.3%	2,125	3.9%	6,080	11.1%
Wood Waste (clean)	162	0.3%	561	1.0%	274	0.5%	997	1.8%
Wood Waste (dirty/coated)	193	0.4%	1,410	2.6%	373	0.7%	1,977	3.6%
Gypsum	37	0.1%	922	1.7%	937	1.7%	1,895	3.5%
Concrete, Brick, Asphalt	-	0.0%	57	0.1%	75	0.1%	132	0.2%
Roofing	48	0.1%	327	0.6%	389	0.7%	764	1.4%
Misc. CD waste	71	0.1%	166	0.3%	78	0.1%	315	0.6%
Electronics	13	0.0%	190	0.3%	30	0.1%	233	0.4%
Audio Visual	7	0.0%	99	0.2%	30	0.1%	136	0.2%
Computer	6	0.0%	91	0.2%	-	0.0%	97	0.2%
Miscellaneous	1,737	3.2%	4,878	8.9%	2,574	4.7%	9,189	16.7%
Carpet & Underlay	-	0.0%	404	0.7%	247	0.4%	651	1.2%
Mattresses	-	0.0%	368	0.7%	268	0.5%	636	1.2%
Small Appliances	85	0.2%	433	0.8%	432	0.8%	950	1.7%
Textiles	671	1.2%	1,723	3.1%	842	1.5%	3,236	5.9%
Rubber/Tires	-	0.0%	61	0.1%	70	0.1%	130	0.2%
Bulky Goods	-	0.0%	671	1.2%	408	0.7%	1,078	2.0%
Fines	-	0.0%	133	0.2%	174	0.3%	307	0.6%
Diapers / Personal Hygiene	937	1.7%	710	1.3%	29	0.1%	1,675	3.1%
Other	44	0.1%	376	0.7%	104	0.2%	525	1.0%
Totals	15,264	27.8%	31,119	56.7%	8,518	15.5%	54,901	100.0%

2.5.4 Waste Diversion Potential

Table 8 presents a summary of the diversion potential within the RDN solid waste stream. Of the total waste stream, an estimated 69% are materials that could be diverted, with 42% being compostable and 27% being recyclable.

RDN Solid Waste Composition Study

Table 8. Projected Rate of Diversion

Material Category	Waste Stream Percentage	2003 Tonnes	Recyclability of Material	Percentage Divertable from Waste Stream	Estimated Tonnes Available for Diversion
Paper	8.4%	4,631			4,395
Old Newsprint (ONP)	2.4%	1,321	100%	2.4%	1,321
Old Corrugated Containers	1.7%	948	100%	1.7%	948
Mixed Paper (MWP)	4.3%	2,363	90%	3.9%	2,126
Glass	1.7%	929			430
Food Containers	0.8%	452	95%	0.8%	430
Non-Container Glass	0.9%	477	0%	0.0%	0
Metal	5.5%	3,014			3,014
Food Containers	0.9%	521	100%	0.9%	521
Scrap Metal	4.5%	2,492	100%	4.5%	2,492
Plastic	12.0%	6,602			1,210
Rigid Containers	2.3%	1,290	60%	1.4%	774
Plastic Film	3.2%	1,743	25%	0.8%	436
Other Plastics	6.5%	3,570	0%	0.0%	0
Beverage Containers	1.1%	622			445
Deposit containers	0.8%	445	100%	0.8%	445
Milk containers	0.3%	177	0%	0.0%	0
Compostables	41.7%	22,914			22,914
Food Waste	30.6%	16,820	100%	30.6%	16,820
Yard Waste	6.9%	3,804	100%	6.9%	3,804
Compostable Paper	4.2%	2,290	100%	4.2%	2,290
HHW	1.3%	688			585
Stewardship Products	0.9%	483	100%	0.9%	483
Non-stewardship Products	0.4%	206	50%	0.2%	103
C&D	11.1%	6,080			3,024
Wood Waste (clean)	1.8%	997	100%	1.8%	997
Wood Waste (dirty/coated)	3.6%	1,977	0%	0.0%	0
Gypsum	3.5%	1,895	100%	3.5%	1,895
Concrete, Brick, Asphalt	0.2%	132	100%	0.2%	132
Roofing	1.4%	764	0%	0.0%	0
Misc. CD waste	0.6%	315	0%	0.0%	0
Electronics	0.4%	233			110
Audio Visual	0.2%	136	10%	0.0%	14
Computer	0.2%	97	100%	0.2%	97
Miscellaneous	16.7%	9,189			1,886
Carpet & Underlay	1.2%	651	0%	0.0%	0
Mattresses	1.2%	636	0%	0.0%	0
Small Appliances	1.7%	950	10%	0.2%	95
Textiles	5.9%	3,236	50%	2.9%	1,618
Rubber/Tires	0.2%	130	50%	0.1%	65
Bulky Goods	2.0%	1,078	10%	0.2%	108
Fines	0.6%	307	0%	0.0%	0
Diapers / Personal Hygiene	3.1%	1,675	0%	0.0%	0
Other	1.0%	525	0%	0.0%	0
Totals	100.0%	54,901		69.2%	38,012

3. Analysis

The data from the waste composition study may reflect on the effectiveness of existing programs and policies that encourage waste diversion. This section provides an analysis of the data as it related to current diversion initiatives and opportunities for additional diversion.

In general, the diversion initiatives appear to be quite effective in the RDN. In particular:

- Paper diversion, particularly of ONP and OCC, through existing recycling programs and the disposal ban on paper have reduced the percentage of recyclable paper in the waste stream to less than 9% of the total waste stream (<6% in the residential waste stream). Prior to the diversion programs, paper was probably closer to 20-30% of the waste disposed.
- The quantity of CD waste in the landfill is low relative to the amount of growth occurring in the RDN this year. This is likely due to the tipping fee for disposal driving the CD waste flow to alternative sites, such as recycling and chipping facilities.
- There are very few tires in the RDN waste stream, indicating success in the provincial tire stewardship program, the RDN disposal ban on tires, and in the waste screening practiced at the RDN disposal facilities.
- There are very few beverage containers in the ICI waste stream (1% of the ICI waste stream is deposit containers) indicating successful participation of the ICI sector in the provincial beverage container stewardship program.

The data also indicated where some improvement to existing diversion initiatives could occur:

- The waste stream consists of 7% yard waste despite a ban on residential collection of yard waste, the promotion of backyard composting and the presence of inexpensive yard waste drop off locations.
- Metal represents 6% of the waste stream despite a disposal ban on this material and several recycling opportunities for this material. Metal levels were highest in the ICI waste stream (6.5%), and were second highest in the self-haul category (5.4%) where hand-sorting of the waste occurs at the point of disposal.
- The diversion of mixed waste paper is not as well done as it is for ONP and OCC. Approximately 4% of the waste stream is mixed waste paper.
- The ICI sector does not appear to be fully utilizing the fibre recycling opportunities available in the RDN. Over 9% of the ICI waste stream is paper.

The results of the composition study indicate that there are some significant opportunities available for additional diversion, particularly as processing capacity becomes available. Some potential opportunities are:

RDN Solid Waste Composition Study

- Compostable material is the single largest material category (42%) and represents the greatest potential for diversion from landfill. Compostables represent 63% of the residential waste stream (or almost 9,600 tonnes per year) and 40% of the ICI waste stream (over 12,000 tonnes per year).
- Plastics represent 12% of the landfill by weight. Given the low density of this material, diversion of this waste stream could have greatest volumetric impact on the disposal system.
- Although stewardship products, both those associated with HHW and beverage containers, are a low percentage of the waste stream (2.4% combined), their presence in the waste stream may indicate a lack of awareness by some generators of the proper method for managing these wastes and an opportunity to increase diversion.
- Clean wood waste represents almost 2% of the waste stream. Incentives to source-separate and make this material available for reuse, recycling or chipping could be explored to increase diversion of this waste stream.

Appendices

Appendix A

Waste Composition Study Data

Appendix A.

Summary Data - RDN Waste Composition Study Sept 27 - 30, 2004

Waste Material	Sample #1 kg	Sample #2 kg	Sample #3 kg	Sample #4 kg	Sample #5 kg	Sample #6 kg	Sample #7 kg	Sample #8 kg	Sample #9 kg	Sample #10 kg	Sample #11 kg	Sample #12 kg	Sample #13 kg	Sample #14 kg	Sample #15 kg	Sample #16 kg	Sample #17 kg	Sample #18 kg
Paper	7.3	5.3	9.5	9.0	30.0	10.0	21.0	8.3	5.0	13.8	6.3	10.3	13.0	14.8	11.3	5.5	0.5	18.0
Old Newsprint (ONP)	1.0	-	9.0	7.0	-	-	1.0	-	1.0	4.8	-	1.3	2.5	-	7.0	-	-	8.0
Old Corrugated Containers (OCC)	1.5	-	0.5	2.0	-	0.5	2.0	-	-	2.5	5.3	-	10.5	-	1.3	-	0.5	10.0
Mixed Paper (MWP)	4.8	5.3	-	-	30.0	9.5	18.0	8.3	4.0	6.5	1.0	9.0	-	14.8	3.0	5.5	-	-
Glass	0.6	1.5	-	2.1	-	7.9	4.9	12.3	3.1	0.8	1.9	8.0	-	-	1.5	0.8	1.0	-
Food Containers	0.6	-	-	1.0	-	1.7	2.2	-	2.8	0.4	1.5	3.5	-	-	0.3	0.4	0.8	-
Non-Container Glass	-	1.5	-	1.1	-	6.3	2.7	12.3	0.3	0.4	0.4	4.5	-	-	1.3	0.4	0.3	-
Metal	0.8	0.5	0.7	4.0	-	2.5	8.2	4.0	3.0	14.8	1.9	2.4	29.5	2.0	3.8	7.1	4.5	-
Food Containers	0.3	0.5	0.2	1.0	-	0.5	2.4	-	3.0	1.3	-	0.9	-	-	3.0	1.6	2.0	-
Scrap Metal	0.5	-	0.5	3.0	-	2.0	5.8	4.0	-	13.5	1.9	1.5	29.5	2.0	0.8	5.5	2.5	-
Plastic	7.8	16.6	8.5	5.8	95.0	15.5	16.6	8.0	11.5	10.7	29.5	11.3	11.5	50.1	3.8	17.8	10.1	-
Rigid Containers	2.0	4.0	1.0	2.0	7.5	6.5	1.8	-	2.0	0.3	5.0	3.5	9.5	5.0	0.8	4.0	2.0	-
Plastic Film	-	-	3.5	1.0	7.5	3.5	5.9	-	4.3	2.5	7.8	3.0	0.5	38.0	2.3	7.5	4.0	-
Other Plastics	5.8	12.6	4.0	2.8	80.0	5.5	9.0	8.0	5.3	8.0	16.8	4.8	1.5	7.1	0.8	6.3	4.1	-
Beverage Containers	0.4	0.4	1.3	1.0	-	0.7	1.4	-	1.5	3.4	0.9	2.0	-	1.0	1.6	0.7	1.3	-
Deposit containers	0.2	0.4	1.0	-	-	0.5	0.4	-	0.5	3.0	0.8	1.3	-	1.0	1.0	0.3	0.5	-
Milk containers	0.2	-	0.3	1.0	-	0.3	1.0	-	1.0	0.4	0.1	0.8	-	-	0.6	0.4	0.8	-
Compostables	30.6	19.8	88.0	26.0	-	26.3	41.8	-	98.5	13.5	29.8	77.3	72.9	74.0	84.1	64.5	93.8	7.4
Food Waste	12.1	19.8	50.0	22.0	-	15.0	36.0	-	84.0	8.3	9.8	48.3	5.0	61.0	62.9	57.5	68.5	7.4
Yard Waste	18.5	-	7.0	-	-	8.0	2.5	-	8.0	-	6.0	19.0	62.0	-	18.3	-	18.0	-
Compostable Paper	-	-	31.0	4.0	-	3.3	3.3	-	6.5	5.3	14.0	10.0	5.9	13.0	3.0	7.0	7.3	-
HHW	0.7	23.0	1.9	-	-	0.5	2.1	-	2.3	0.7	-	1.5	1.0	-	0.5	0.9	0.3	-
Stewardship Products	-	23.0	0.3	-	-	0.5	1.8	-	-	-	-	0.5	-	-	-	-	0.1	-
Non-stewardship Products	0.7	-	1.6	-	-	-	0.3	-	2.3	0.7	-	1.0	1.0	-	0.5	0.9	0.3	-
C&D	30.8	22.5	23.0	1.5	-	26.5	18.3	5.3	8.0	32.3	24.3	4.5	5.0	-	1.8	5.0	-	84.0
Wood Waste (clean)	-	-	-	-	-	4.5	-	-	8.0	-	-	-	-	-	-	-	-	-
Wood Waste (dirty/coated)	30.8	11.5	23.0	1.0	-	13.0	8.0	5.3	-	2.5	4.3	3.5	5.0	-	-	5.0	-	-
Gypsum	-	10.0	-	-	-	0.3	3.0	-	-	-	20.0	-	-	-	-	-	-	77.0
Concrete, Brick, Asphalt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0
Roofing	-	1.0	-	0.5	-	1.5	-	-	-	29.8	-	-	-	-	-	-	-	-
Misc. CD waste	-	-	-	-	-	7.3	7.3	-	-	-	-	1.0	-	-	1.8	-	-	-
Electronics	-	-	0.3	-	-	-	-	-	0.5	-	-	-	-	-	-	0.4	-	-
Audio Visual	-	-	0.3	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-
Computer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-
Miscellaneous	21.5	50.7	2.5	2.0	-	36.5	10.0	86.3	16.3	17.8	40.2	5.0	1.5	-	5.8	5.3	25.0	42.0
Carpet & Underlay	18.0	-	-	-	-	10.0	-	-	-	-	-	-	-	-	-	-	-	-
Mattresses	-	-	-	-	-	-	-	-	-	-	20.0	-	-	-	-	-	-	25.0
Small Appliances	-	4.0	-	-	-	-	-	4.5	-	-	1.0	0.3	-	-	-	-	-	-
Textiles	2.5	14.5	1.5	2.0	-	7.3	1.5	26.8	3.8	17.5	7.8	3.0	1.5	-	1.3	3.0	4.3	12.0
Rubber/Tires	-	-	-	-	-	6.5	-	-	-	-	0.9	-	-	-	-	-	-	-
Bulky Goods	-	30.0	-	-	-	8.0	-	44.0	-	-	-	-	-	-	-	-	-	-
Fines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diapers / Personal Hygiene	1.0	0.5	1.0	-	-	2.2	8.5	-	9.5	-	0.5	1.7	-	-	4.5	2.3	20.8	-
Other	-	1.7	-	-	-	2.5	-	11.0	3.0	0.3	10.0	-	-	-	-	-	-	5.0
Totals	100.3	140.1	135.7	51.3	125.0	126.3	124.1	124.0	149.6	107.6	134.5	122.1	134.4	141.9	114.0	107.8	136.4	151.4

Appendix A.

Summary Data - RDN Waste Composition Study Sept 27 - 30, 2004

Waste Material	Sample #19 kg	Sample #20 kg	Sample #21 kg	Sample #22 kg	Sample #23 kg	Sample #24 kg	Sample #25 kg	Sample #26 kg	Sample #27 kg	Sample #28 kg	Sample #29 kg	Sample #30 kg	Sample #31 kg	Sample #32 kg	Totals kg	Percentages
Paper	2.0	25.3	4.5	22.2	19.4	1.5	2.5	11.8	2.0	10.5	15.5	6.8	24.0	12.0	358.3	9.4%
Old Newsprint (ONP)	2.0	10.3	-	3.0	-	0.5	-	2.5	-	-	10.0	4.6	16.0	0.5	91.8	2.4%
Old Corrugated Containers (OCC)	-	-	4.5	4.0	17.4	-	2.0	1.0	0.8	6.2	2.0	2.2	2.0	-	78.5	2.1%
Mixed Paper (MWP)	-	15.0	-	15.2	2.0	1.0	0.5	8.3	1.3	4.3	3.5	-	6.0	11.5	188.0	4.9%
Glass	0.9	-	-	1.8	2.2	1.5	0.6	1.3	3.2	1.1	0.3	2.6	3.5	2.0	67.0	1.8%
Food Containers	0.8	-	-	-	2.2	1.5	0.6	0.8	-	1.1	-	2.6	3.0	2.0	29.5	0.8%
Non-Container Glass	0.1	-	-	1.8	-	-	-	0.5	3.2	-	0.3	-	0.5	-	37.6	1.0%
Metal	3.8	7.5	22.0	45.2	30.8	4.5	16.5	2.1	3.0	5.0	8.5	0.9	7.3	0.8	247.3	6.5%
Food Containers	2.0	0.5	-	1.2	0.3	2.0	-	1.6	-	0.5	0.5	0.9	1.8	0.8	28.6	0.8%
Scrap Metal	1.8	7.0	22.0	44.0	30.5	2.5	16.5	0.5	3.0	4.5	8.0	-	5.5	-	218.7	5.7%
Plastic	12.0	7.5	9.0	14.7	13.2	16.0	15.5	12.0	14.6	5.8	17.5	17.1	22.5	2.9	510.0	13.4%
Rigid Containers	2.5	-	-	-	5.4	2.5	12.5	3.3	0.3	0.3	1.0	3.3	2.5	0.5	90.7	2.4%
Plastic Film	2.0	3.3	6.0	4.4	4.8	2.5	1.0	4.0	0.1	0.8	6.0	8.4	6.5	1.1	141.9	3.7%
Other Plastics	7.5	4.3	3.0	10.3	3.0	11.0	2.0	4.8	14.3	4.8	10.5	5.4	13.5	1.3	277.4	7.3%
Beverage Containers	1.1	-	-	0.5	0.3	0.8	-	2.0	0.9	0.2	0.4	3.0	1.3	10.0	37.6	1.0%
Deposit containers	0.1	-	-	0.5	0.3	0.3	-	1.4	0.8	0.2	0.3	2.8	0.8	9.5	27.3	0.7%
Milk containers	1.0	-	-	-	-	0.5	-	0.6	0.1	-	0.1	0.2	0.5	0.5	10.3	0.3%
Compostables	67.8	56.5	85.5	23.0	46.7	86.3	1.0	96.8	10.0	16.5	16.5	89.4	58.0	2.0	1,503.9	39.5%
Food Waste	45.0	36.0	76.0	10.4	44.0	43.0	-	76.8	10.0	16.5	8.5	84.6	53.0	-	1,071.1	28.1%
Yard Waste	12.8	20.5	-	12.6	-	36.3	1.0	12.3	-	-	-	0.5	-	-	263.1	6.9%
Compostable Paper	10.0	-	9.5	-	2.7	7.0	-	7.8	-	-	8.0	4.3	5.0	2.0	169.7	4.5%
HHW	-	1.5	-	-	0.3	1.0	-	0.3	-	0.5	0.8	0.1	0.3	0.8	40.8	1.1%
Stewardship Products	-	-	-	-	-	-	-	-	-	0.5	0.8	-	-	-	27.4	0.7%
Non-stewardship Products	-	1.5	-	-	0.3	1.0	-	0.3	-	-	0.0	0.1	0.3	0.8	13.4	0.4%
C&D	9.5	21.8	-	12.5	11.4	5.5	25.0	1.9	7.5	0.3	17.5	12.7	3.0	-	421.1	11.1%
Wood Waste (clean)	0.8	12.3	-	-	11.0	-	21.0	1.8	-	-	5.5	3.2	0.5	-	68.6	1.8%
Wood Waste (dirty/coated)	-	9.5	-	12.5	0.4	5.5	-	0.1	7.5	0.3	12.0	9.5	2.5	-	172.5	4.5%
Gypsum	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	112.8	3.0%
Concrete, Brick, Asphalt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0	0.2%
Roofing	3.3	-	-	-	-	-	4.0	-	-	-	-	-	-	-	40.0	1.1%
Misc. CD waste	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	20.3	0.5%
Electronics	-	0.4	-	10.3	1.0	-	-	-	2.0	0.8	0.4	7.3	-	-	23.2	0.6%
Audio Visual	-	0.4	-	-	1.0	-	-	-	2.0	0.8	-	7.3	-	-	12.1	0.3%
Computer	-	-	-	10.3	-	-	-	-	-	-	0.4	-	-	-	11.1	0.3%
Miscellaneous	29.0	12.5	9.0	13.9	0.3	13.0	61.2	3.3	21.8	6.1	27.5	7.1	20.3	4.0	596.6	15.7%
Carpet & Underlay	-	2.5	-	-	-	-	13.0	-	-	-	5.9	-	-	-	49.4	1.3%
Mattresses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45.0	1.2%
Small Appliances	-	-	-	-	-	3.5	32.0	0.3	2.3	-	1.3	-	2.0	2.0	53.0	1.4%
Textiles	4.5	8.0	9.0	8.7	0.3	9.5	1.2	3.0	19.5	5.8	10.3	4.0	16.3	0.8	210.7	5.5%
Rubber/Tires	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	0.2%
Bulky Goods	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82.0	2.2%
Fines	-	-	-	-	-	-	15.0	-	-	-	-	-	-	1.3	16.3	0.4%
Diapers / Personal Hygiene	24.5	2.0	-	5.2	-	-	-	-	-	-	0.5	0.3	2.0	-	86.8	2.3%
Other	-	-	-	-	-	-	-	-	-	0.3	9.6	2.8	-	-	46.0	1.2%
Totals	126.0	133.0	130.0	144.1	125.3	130.0	122.4	131.2	64.9	46.6	104.9	146.9	140.1	34.4	3,805.7	100.0%

Appendix A.
Landfill Summary Data - RDN Waste Composition Study, Sept 27 - 30, 2004

Waste Material	Sample #9 SF Res	Sample #16 SF Res	Sample #17 SF Res	Sample #24 SF Res	Sample #2 SH	Sample #6 SH	Sample #10 SH	Sample #18 SH	Sample #1 ICI	Sample #3 ICI	Sample #5 ICI	Sample #7 ICI	Sample #8 ICI	Sample #11 ICI	Sample #13 ICI	Sample #14 ICI	Sample #20 ICI	Sample #21 ICI	Sample #22 ICI	Sample #23 ICI	Sample #4 MF	Sample #12 MF	Totals kg	Waste Stream Percentage	
Paper	5.0	5.5	0.5	1.5	5.3	10.0	13.8	18.0	7.3	9.5	30.0	21.0	8.3	6.3	13.0	14.8	25.3	4.5	22.2	19.4	22.5	10.3	260.1	9.4%	
Old Newsprint (ONP)	1.0	0.0	0.0	0.5	-	-	4.8	8.0	1.0	9.0	-	1.0	-	-	2.5	-	10.3	-	3.0	-	7.0	1.3	49.3	1.8%	
Old Corrugated Containers (OCC)	0.0	0.0	0.5	0.0	-	0.5	2.5	10.0	1.5	0.5	-	2.0	-	5.3	10.5	-	-	4.5	4.0	17.4	2.0	-	61.1	2.2%	
Mixed Paper (MWP)	4.0	5.5	0.0	1.0	5.3	9.5	6.5	-	4.8	-	30.0	18.0	8.3	1.0	-	14.8	15.0	-	15.2	2.0	-	9.0	149.8	5.4%	
Glass	3.1	0.8	1.0	1.5	1.5	7.9	0.8	-	0.6	-	-	4.9	12.3	1.9	-	-	-	-	1.8	2.2	5.1	8.0	50.1	1.8%	
Food Containers	2.8	0.4	0.8	1.5	-	1.7	0.4	-	0.6	-	-	2.2	-	1.5	-	-	-	-	-	-	1.0	3.5	18.4	0.7%	
Non-Container Glass	0.3	0.4	0.3	0.0	1.5	6.3	0.4	-	-	-	-	2.7	12.3	0.4	-	-	-	-	-	1.8	-	1.1	4.5	31.7	1.1%
Metal	3.0	7.1	4.5	4.5	0.5	2.5	14.8	-	0.8	0.7	-	8.2	4.0	1.9	29.5	2.0	7.5	22.0	45.2	30.8	10.0	2.4	195.8	7.1%	
Food Containers	3.0	1.6	2.0	2.0	0.5	0.5	1.3	-	0.3	0.2	-	2.4	-	-	-	-	0.5	-	1.2	0.3	1.0	0.9	17.6	0.6%	
Scrap Metal	0.0	5.5	2.5	2.5	-	2.0	13.5	-	0.5	0.5	-	5.8	4.0	1.9	29.5	2.0	7.0	22.0	44.0	30.5	3.0	1.5	178.2	6.4%	
Plastic	11.5	17.8	10.1	16.0	16.6	15.5	10.7	-	7.8	8.5	95.0	16.6	8.0	29.5	11.5	50.1	7.5	9.0	14.7	13.2	14.4	11.3	386.5	13.9%	
Rigid Containers	2.0	4.0	2.0	2.5	4.0	6.5	0.3	-	2.0	1.0	7.5	1.8	-	5.0	9.5	5.0	-	-	-	5.4	2.0	3.5	63.9	2.3%	
Plastic Film	4.3	7.5	4.0	2.5	-	3.5	2.5	-	-	3.5	7.5	5.9	-	7.8	0.5	38.0	3.3	6.0	4.4	4.8	1.0	3.0	109.8	4.0%	
Other Plastics	5.3	6.3	4.1	11.0	12.6	5.5	8.0	-	5.8	4.0	80.0	9.0	8.0	16.8	1.5	7.1	4.3	3.0	10.3	3.0	2.8	4.8	212.8	7.7%	
Beverage Containers	1.5	0.7	1.3	0.8	0.4	0.7	3.4	-	0.4	1.3	-	1.4	-	0.9	-	1.0	-	-	0.5	0.3	2.5	2.0	17.3	0.6%	
Deposit containers	0.5	0.3	0.5	0.3	0.4	0.5	3.0	-	0.2	1.0	-	0.4	-	0.8	-	1.0	-	-	0.5	0.3	-	1.3	10.6	0.4%	
Milk containers	1.0	0.4	0.8	0.5	-	0.3	0.4	-	0.2	0.3	-	1.0	-	0.1	-	-	-	-	-	-	1.0	0.8	6.7	0.2%	
Compostables	98.5	64.5	93.8	86.3	42.8	26.8	14.2	7.4	30.6	88.0	-	41.8	-	29.8	72.9	74.0	56.5	85.5	23.0	46.7	65.0	77.3	1061.9	38.3%	
Food Waste	84.0	57.5	68.5	43.0	19.8	15.0	8.3	7.4	12.1	50.0	-	36.0	-	9.8	5.0	61.0	36.0	76.0	10.4	44.0	22.0	48.3	713.9	25.7%	
Yard Waste	8.0	0.0	18.0	36.3	-	8.0	-	-	18.5	7.0	-	2.5	-	6.0	62.0	-	20.5	-	12.6	-	-	19.0	218.4	7.9%	
Compostable Paper	6.5	7.0	7.3	7.0	-	3.3	5.3	-	-	31.0	-	3.3	-	14.0	5.9	13.0	-	9.5	-	2.7	4.0	10.0	129.6	4.7%	
HHW	2.3	0.9	0.3	1.0	23.0	0.5	0.7	-	0.7	1.9	-	2.1	-	-	1.0	-	1.5	-	-	0.3	-	1.5	37.5	1.4%	
Stewardship Products	0.0	0.0	0.1	0.0	23.0	0.5	-	-	-	0.3	-	1.8	-	-	-	-	-	-	-	-	-	0.5	26.1	0.9%	
Non-stewardship Products	2.3	0.9	0.3	1.0	-	-	0.7	-	0.7	1.6	-	0.3	-	-	1.0	-	1.5	-	-	0.3	-	1.0	11.4	0.4%	
C&D	8.0	5.0	0.0	5.5	22.5	26.5	32.3	84.0	30.8	23.0	-	18.3	5.3	24.3	5.0	-	21.8	-	12.5	11.4	3.8	4.5	341.9	12.3%	
Wood Waste (clean)	8.0	0.0	0.0	0.0	-	4.5	-	-	-	-	-	-	-	-	-	-	12.3	-	-	11.0	-	-	35.8	1.3%	
Wood Waste (dirty/coated)	0.0	5.0	0.0	5.5	11.5	13.0	2.5	-	30.8	23.0	-	8.0	5.3	4.3	5.0	-	9.5	-	12.5	0.4	1.0	3.5	140.6	5.1%	
Gypsum	0.0	0.0	0.0	0.0	10.0	0.3	-	77.0	-	-	-	3.0	-	20.0	-	-	-	-	-	-	-	-	-	110.3	4.0%
Concrete, Brick, Asphalt	0.0	0.0	0.0	0.0	-	-	-	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0	0.3%
Roofing	0.0	0.0	0.0	0.0	1.0	1.5	29.8	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	32.8	1.2%	
Misc. CD waste	0.0	0.0	0.0	0.0	-	7.3	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-	-	1.0	15.5	0.6%	
Electronics	0.5	0.4	0.0	0.0	-	-	-	-	-	0.3	-	-	-	-	-	-	0.4	-	10.3	1.0	-	-	12.8	0.5%	
Audio Visual	0.5	0.0	0.0	0.0	-	-	-	-	-	0.3	-	-	-	-	-	-	0.4	-	-	1.0	-	-	2.1	0.1%	
Computer	0.0	0.4	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.3	-	-	-	10.7	0.4%	
Miscellaneous	16.3	5.3	25.0	13.0	50.7	36.5	17.8	42.0	21.5	2.5	-	10.0	86.3	40.2	1.5	-	12.5	9.0	13.9	0.3	5.0	5.0	410.8	14.8%	
Carpet & Underlay	0.0	0.0	0.0	0.0	-	10.0	-	-	18.0	-	-	-	-	-	-	-	2.5	-	-	-	-	-	-	30.5	1.1%
Mattresses	0.0	0.0	0.0	0.0	-	-	-	25.0	-	-	-	-	-	20.0	-	-	-	-	-	-	-	-	-	45.0	1.6%
Small Appliances	0.0	0.0	0.0	3.5	4.0	-	-	-	-	-	-	-	4.5	1.0	-	-	-	-	-	-	-	0.3	13.3	0.5%	
Textiles	3.8	3.0	4.3	9.5	14.5	7.3	17.5	12.0	2.5	1.5	-	1.5	26.8	7.8	1.5	-	8.0	9.0	8.7	0.3	2.0	3.0	144.2	5.2%	
Rubber/Tires	0.0	0.0	0.0	0.0	-	6.5	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	7.4	0.3%
Bulky Goods	0.0	0.0	0.0	0.0	30.0	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82.0	3.0%
Fines	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0%
Diapers / Personal Hygiene	9.5	2.3	20.8	0.0	0.5	2.2	-	-	1.0	1.0	-	8.5	-	0.5	-	-	2.0	-	5.2	-	-	1.7	55.1	2.0%	
Other	3.0	0.0	0.0	0.0	1.7	2.5	0.3	5.0	-	-	-	-	11.0	10.0	-	-	-	-	-	-	-	-	-	33.4	1.2%
Totals	149.6	107.8	136.4	130.0	115.5	87.0	79.5	126.0	100.3	135.7	125.0	124.1	124.0	134.5	134.4	141.9	133.0	130.0	144.1	125.3	128.3	122.1	2774.5	100.0%	

Appendix A.

Transfer Station Summary Data - RDN Waste Composition Study, Sept 27 - 30, 2004

Waste Material	Sample #15 SF Res	Sample #19 SF Res	Sample #26 SF Res	Sample #31 SF Res	Sample #25 SH	Sample #27 SH	Sample #28 SH	Sample #32 SH	Sample #29 ICI	Sample #30 ICI	Totals kg	Waste Stream Percentage
Paper	11.3	2.0	11.8	24.0	2.5	2.0	11.5	12.0	15.5	6.8	98.2	9.5%
Old Newsprint (ONP)	7.0	2.0	2.5	16.0	-	-	-	0.5	10.0	4.6	42.6	4.1%
Old Corrugated Containers (OCC)	1.3	0.0	1.0	2.0	2.0	0.8	6.2	-	2.0	2.2	17.4	1.7%
Mixed Paper (MWP)	3.0	0.0	8.3	6.0	0.5	1.3	4.3	11.5	3.5	-	38.3	3.7%
Glass	1.5	0.9	1.3	3.5	0.6	3.2	1.1	2.0	0.3	2.6	16.9	1.6%
Food Containers	0.3	0.8	0.8	3.0	0.6	-	1.1	2.0	-	2.6	11.1	1.1%
Non-Container Glass	1.3	0.1	0.5	0.5	-	3.2	-	-	0.3	-	5.9	0.6%
Metal	3.8	3.8	2.1	7.3	16.5	3.0	5.0	0.8	8.5	0.9	51.5	5.0%
Food Containers	3.0	2.0	1.6	1.8	-	-	0.5	0.8	0.5	0.9	11.0	1.1%
Scrap Metal	0.8	1.8	0.5	5.5	16.5	3.0	4.5	-	8.0	-	40.5	3.9%
Plastic	3.8	12.0	12.0	22.5	15.5	14.6	5.8	2.9	17.5	17.1	123.6	12.0%
Rigid Containers	0.8	2.5	3.3	2.5	12.5	0.3	0.3	0.5	1.0	3.3	26.8	2.6%
Plastic Film	2.3	2.0	4.0	6.5	1.0	0.1	0.8	1.1	6.0	8.4	32.1	3.1%
Other Plastics	0.8	7.5	4.8	13.5	2.0	14.3	4.8	1.3	10.5	5.4	64.6	6.3%
Beverage Containers	1.6	1.1	2.0	1.3	-	0.9	0.2	10.0	0.4	3.0	20.3	2.0%
Deposit containers	1.0	0.1	1.4	0.8	-	0.8	0.2	9.5	0.3	2.8	16.7	1.6%
Milk containers	0.6	1.0	0.6	0.5	-	0.1	-	0.5	0.1	0.2	3.7	0.4%
Compostables	84.1	67.8	96.8	58.0	1.0	10.0	16.5	2.0	16.5	89.4	442.0	42.9%
Food Waste	62.9	45.0	76.8	53.0	-	10.0	16.5	-	8.5	84.6	357.2	34.6%
Yard Waste	18.3	12.8	12.3	0.0	1.0	-	-	-	-	0.5	44.8	4.3%
Compostable Paper	3.0	10.0	7.8	5.0	-	-	-	2.0	8.0	4.3	40.1	3.9%
HHW	0.5	0.0	0.3	0.3	-	-	0.5	0.8	0.8	0.1	3.3	0.3%
Stewardship Products	0.0	0.0	0.0	0.0	-	-	0.5	-	0.8	-	1.3	0.1%
Non-stewardship Products	0.5	0.0	0.3	0.3	-	-	-	-	0.0	0.1	2.0	0.2%
C&D	1.8	9.5	1.9	3.0	25.0	7.5	0.3	-	17.5	12.7	79.2	7.7%
Wood Waste (clean)	0.0	0.8	1.8	0.5	21.0	-	-	-	5.5	3.2	32.8	3.2%
Wood Waste (dirty/coated)	0.0	0.0	0.1	2.5	-	7.5	0.3	-	12.0	9.5	31.9	3.1%
Gypsum	0.0	2.5	0.0	0.0	-	-	-	-	-	-	2.5	0.2%
Concrete, Brick, Asphalt	0.0	0.0	0.0	0.0	-	-	-	-	-	-	0.0	0.0%
Roofing	0.0	3.3	0.0	0.0	4.0	-	-	-	-	-	7.3	0.7%
Misc. CD waste	1.8	3.0	0.0	0.0	-	-	-	-	-	-	4.8	0.5%
Electronics	0.0	0.0	0.0	0.0	-	2.0	0.8	-	0.4	7.3	10.4	1.0%
Audio Visual	0.0	0.0	0.0	0.0	-	2.0	0.8	-	-	7.3	10.0	1.0%
Computer	0.0	0.0	0.0	0.0	-	-	-	-	0.4	-	0.4	0.0%
Miscellaneous	5.8	29.0	3.3	20.3	61.2	21.8	6.1	4.0	27.5	7.1	185.8	18.0%
Carpet & Underlay	0.0	0.0	0.0	0.0	13.0	-	-	-	5.9	-	18.9	1.8%
Mattresses	0.0	0.0	0.0	0.0	-	-	-	-	-	-	0.0	0.0%
Small Appliances	0.0	0.0	0.3	2.0	32.0	2.3	-	2.0	1.3	-	39.8	3.9%
Textiles	1.3	4.5	3.0	16.3	1.2	19.5	5.8	0.8	10.3	4.0	66.5	6.4%
Rubber/Tires	0.0	0.0	0.0	0.0	-	-	-	-	-	-	0.0	0.0%
Bulky Goods	0.0	0.0	0.0	0.0	-	-	-	-	-	-	0.0	0.0%
Fines	0.0	0.0	0.0	0.0	15.0	-	-	1.3	-	-	16.3	1.6%
Diapers / Personal Hygiene	4.5	24.5	0.0	2.0	-	-	-	-	0.5	0.3	31.8	3.1%
Other	0.0	0.0	0.0	0.0	-	-	0.3	-	9.6	2.8	12.6	1.2%
Totals	114.0	126.0	131.2	140.1	122.4	64.9	46.6	34.4	104.9	146.9	1031.2	100.0%

Appendix A.

Curbside Data Summary - RDN Waste Composition Study, Sept 27 - 30, 2004

Waste Material	Sample #9 kg	Sample #16 kg	Sample #17 kg	Sample #24 kg	Sample #15 kg	Sample #19 kg	Sample #26 kg	Sample #31 kg	Totals kg	Percentages
Paper	5.0	5.5	0.5	1.5	11.3	2.0	11.8	24.0	61.5	5.9%
Old Newsprint (ONP)	1.0	0.0	0.0	0.5	7.0	2.0	2.5	16.0	29.0	2.8%
Old Corrugated Containers (OCC)	0.0	0.0	0.5	0.0	1.3	0.0	1.0	2.0	4.8	0.5%
Mixed Paper (MWP)	4.0	5.5	0.0	1.0	3.0	0.0	8.3	6.0	27.8	2.7%
Glass	3.1	0.8	1.0	1.5	1.5	0.9	1.3	3.5	13.4	1.3%
Food Containers	2.8	0.4	0.8	1.5	0.3	0.8	0.8	3.0	10.2	1.0%
Non-Container Glass	0.3	0.4	0.3	0.0	1.3	0.1	0.5	0.5	3.3	0.3%
Metal	3.0	7.1	4.5	4.5	3.8	3.8	2.1	7.3	36.0	3.5%
Food Containers	3.0	1.6	2.0	2.0	3.0	2.0	1.6	1.8	17.0	1.6%
Scrap Metal	0.0	5.5	2.5	2.5	0.8	1.8	0.5	5.5	19.0	1.8%
Plastic	11.5	17.8	10.1	16.0	3.8	12.0	12.0	22.5	105.6	10.2%
Rigid Containers	2.0	4.0	2.0	2.5	0.8	2.5	3.3	2.5	19.5	1.9%
Plastic Film	4.3	7.5	4.0	2.5	2.3	2.0	4.0	6.5	33.0	3.2%
Other Plastics	5.3	6.3	4.1	11.0	0.8	7.5	4.8	13.5	53.1	5.1%
Beverage Containers	1.5	0.7	1.3	0.8	1.6	1.1	2.0	1.3	10.1	1.0%
Deposit containers	0.5	0.3	0.5	0.3	1.0	0.1	1.4	0.8	4.7	0.5%
Milk containers	1.0	0.4	0.8	0.5	0.6	1.0	0.6	0.5	5.4	0.5%
Compostables	98.5	64.5	93.8	86.3	84.1	67.8	96.8	58.0	649.7	62.8%
Food Waste	84.0	57.5	68.5	43.0	62.9	45.0	76.8	53.0	490.6	47.4%
Yard Waste	8.0	0.0	18.0	36.3	18.3	12.8	12.3	0.0	105.5	10.2%
Compostable Paper	6.5	7.0	7.3	7.0	3.0	10.0	7.8	5.0	53.6	5.2%
HHW	2.3	0.9	0.3	1.0	0.5	0.0	0.3	0.3	5.5	0.5%
Stewardship Products	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0%
Non-stewardship Products	2.3	0.9	0.3	1.0	0.5	0.0	0.3	0.3	5.4	0.5%
C&D	8.0	5.0	0.0	5.5	1.8	9.5	1.9	3.0	34.7	3.3%
Wood Waste (clean)	8.0	0.0	0.0	0.0	0.0	0.8	1.8	0.5	11.0	1.1%
Wood Waste (dirty/coated)	0.0	5.0	0.0	5.5	0.0	0.0	0.1	2.5	13.1	1.3%
Gypsum	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.5	0.2%
Concrete, Brick, Asphalt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Roofing	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.3%
Misc. CD waste	0.0	0.0	0.0	0.0	1.8	3.0	0.0	0.0	4.8	0.5%
Electronics	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.1%
Audio Visual	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0%
Computer	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0%
Miscellaneous	16.3	5.3	25.0	13.0	5.8	29.0	3.3	20.3	117.8	11.4%
Carpet & Underlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Mattresses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Small Appliances	0.0	0.0	0.0	3.5	0.0	0.0	0.3	2.0	5.8	0.6%
Textiles	3.8	3.0	4.3	9.5	1.3	4.5	3.0	16.3	45.5	4.4%
Rubber/Tires	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Bulky Goods	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Fines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Diapers / Personal Hygiene	9.5	2.3	20.8	0.0	4.5	24.5	0.0	2.0	63.5	6.1%
Other	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.3%
Totals	149.6	107.8	136.4	130.0	114.0	126.0	131.2	140.1	1034.9	100.0%

Appendix A.

Self-Haul Data Summary - RDN Waste Composition Study, Sept 27 - 30, 2004

Waste Material	Sample #2 kg	Sample #6 kg	Sample #10 kg	Sample #18 kg	Sample #25 kg	Sample #27 kg	Sample #28 kg	Sample #32 kg	Totals kg	Percentages
Paper	5.3	10.0	13.8	18.0	2.5	2.0	10.5	12.0	74.0	9.3%
Old Newsprint (ONP)	-	-	4.8	8.0	-	-	-	0.5	13.3	1.7%
Old Corrugated Containers (OCC)	-	0.5	2.5	10.0	2.0	0.8	6.2	-	22.0	2.8%
Mixed Paper (MWP)	5.3	9.5	6.5	-	0.5	1.3	4.3	11.5	38.8	4.9%
Glass	1.5	7.9	0.8	-	0.6	3.2	1.1	2.0	17.1	2.2%
Food Containers	-	1.7	0.4	-	0.6	-	1.1	2.0	5.8	0.7%
Non-Container Glass	1.5	6.3	0.4	-	-	3.2	-	-	11.4	1.4%
Metal	0.5	2.5	14.8	-	16.5	3.0	5.0	0.8	43.0	5.4%
Food Containers	0.5	0.5	1.3	-	-	-	0.5	0.8	3.5	0.4%
Scrap Metal	-	2.0	13.5	-	16.5	3.0	4.5	-	39.5	5.0%
Plastic	16.6	15.5	10.7	-	15.5	14.6	5.8	2.9	81.5	10.3%
Rigid Containers	4.0	6.5	0.3	-	12.5	0.3	0.3	0.5	24.3	3.1%
Plastic Film	-	3.5	2.5	-	1.0	0.1	0.8	1.1	9.0	1.1%
Other Plastics	12.6	5.5	8.0	-	2.0	14.3	4.8	1.3	48.3	6.1%
Beverage Containers	0.4	0.7	3.4	-	-	0.9	0.2	10.0	15.5	2.0%
Deposit containers	0.4	0.5	3.0	-	-	0.8	0.2	9.5	14.2	1.8%
Milk containers	-	0.3	0.4	-	-	0.1	-	0.5	1.3	0.2%
Compostables	19.8	26.3	13.5	7.4	1.0	10.0	16.5	2.0	96.4	12.1%
Food Waste	19.8	15.0	8.3	7.4	-	10.0	16.5	-	76.9	9.7%
Yard Waste	-	8.0	-	-	1.0	-	-	-	9.0	1.1%
Compostable Paper	-	3.3	5.3	-	-	-	-	2.0	10.5	1.3%
HHW	23.0	0.5	0.7	-	-	-	0.5	0.8	25.5	3.2%
Stewardship Products	23.0	0.5	-	-	-	-	0.5	-	24.0	3.0%
Non-stewardship Products	-	-	0.7	-	-	-	-	0.8	1.5	0.2%
C&D	22.5	26.5	32.3	84.0	25.0	7.5	0.3	-	198.0	25.0%
Wood Waste (clean)	-	4.5	-	-	21.0	-	-	-	25.5	3.2%
Wood Waste (dirty/coated)	11.5	13.0	2.5	-	-	7.5	0.3	-	34.8	4.4%
Gypsum	10.0	0.3	-	77.0	-	-	-	-	87.3	11.0%
Concrete, Brick, Asphalt	-	-	-	7.0	-	-	-	-	7.0	0.9%
Roofing	1.0	1.5	29.8	-	4.0	-	-	-	36.3	4.6%
Misc. CD waste	-	7.3	-	-	-	-	-	-	7.3	0.9%
Electronics	-	-	-	-	-	2.0	0.8	-	2.8	0.3%
Audio Visual	-	-	-	-	-	2.0	0.8	-	2.8	0.3%
Computer	-	-	-	-	-	-	-	-	-	0.0%
Miscellaneous	50.7	36.5	17.8	42.0	61.2	21.8	6.1	4.0	239.8	30.2%
Carpet & Underlay	-	10.0	-	-	13.0	-	-	-	23.0	2.9%
Mattresses	-	-	-	25.0	-	-	-	-	25.0	3.2%
Small Appliances	4.0	-	-	-	32.0	2.3	-	2.0	40.2	5.1%
Textiles	14.5	7.3	17.5	12.0	1.2	19.5	5.8	0.8	78.5	9.9%
Rubber/Tires	-	6.5	-	-	-	-	-	-	6.5	0.8%
Bulky Goods	30.0	8.0	-	-	-	-	-	-	38.0	4.8%
Fines	-	-	-	-	15.0	-	-	1.3	16.3	2.0%
Diapers / Personal Hygiene	0.5	2.2	-	-	-	-	-	-	2.7	0.3%
Other	1.7	2.5	0.3	5.0	-	-	0.3	-	9.7	1.2%
Totals	140.1	126.3	107.6	151.4	122.4	64.9	46.6	34.4	793.6	100.0%

Appendix A.

ICI Data Summary - RDN Waste Composition Study, Sept 27 - 30, 2004

Waste Material	Sample #1 kg	Sample #2 kg	Sample #3 kg	Sample #4 kg	Sample #5 kg	Sample #6 kg	Sample #7 kg	Sample #8 kg	Sample #9 kg	Sample #10 kg	Sample #11 kg	Sample #12 kg	Sample #13 kg	Sample #14 kg	Sample #15 kg	Sample #16 kg
Paper	7.3	5.3	9.5	9.0	30.0	10.0	21.0	8.3	5.0	13.8	6.3	10.3	13.0	14.8	11.3	5.5
Old Newsprint (ONP)	1.0	-	9.0	7.0	-	-	1.0	-	1.0	4.8	-	1.3	2.5	-	7.0	-
Old Corrugated Containers (OCC)	1.5	-	0.5	2.0	-	0.5	2.0	-	-	2.5	5.3	-	10.5	-	1.3	-
Mixed Paper (MWP)	4.8	5.3	-	-	30.0	9.5	18.0	8.3	4.0	6.5	1.0	9.0	-	14.8	3.0	5.5
Glass	0.6	1.5	-	2.1	-	7.9	4.9	12.3	3.1	0.8	1.9	8.0	-	-	1.5	0.8
Food Containers	0.6	-	-	1.0	-	1.7	2.2	-	2.8	0.4	1.5	3.5	-	-	0.3	0.4
Non-Container Glass	-	1.5	-	1.1	-	6.3	2.7	12.3	0.3	0.4	0.4	4.5	-	-	1.3	0.4
Metal	0.8	0.5	0.7	4.0	-	2.5	8.2	4.0	3.0	14.8	1.9	2.4	29.5	2.0	3.8	7.1
Food Containers	0.3	0.5	0.2	1.0	-	0.5	2.4	-	3.0	1.3	-	0.9	-	-	3.0	1.6
Scrap Metal	0.5	-	0.5	3.0	-	2.0	5.8	4.0	-	13.5	1.9	1.5	29.5	2.0	0.8	5.5
Plastic	7.8	16.6	8.5	5.8	95.0	15.5	16.6	8.0	11.5	10.7	29.5	11.3	11.5	50.1	3.8	17.8
Rigid Containers	2.0	4.0	1.0	2.0	7.5	6.5	1.8	-	2.0	0.3	5.0	3.5	9.5	5.0	0.8	4.0
Plastic Film	-	-	3.5	1.0	7.5	3.5	5.9	-	4.3	2.5	7.8	3.0	0.5	38.0	2.3	7.5
Other Plastics	5.8	12.6	4.0	2.8	80.0	5.5	9.0	8.0	5.3	8.0	16.8	4.8	1.5	7.1	0.8	6.3
Beverage Containers	0.4	0.4	1.3	1.0	-	0.7	1.4	-	1.5	3.4	0.9	2.0	-	1.0	1.6	0.7
Deposit containers	0.2	0.4	1.0	-	-	0.5	0.4	-	0.5	3.0	0.8	1.3	-	1.0	1.0	0.3
Milk containers	0.2	-	0.3	1.0	-	0.3	1.0	-	1.0	0.4	0.1	0.8	-	-	0.6	0.4
Compostables	30.6	19.8	88.0	26.0	-	26.3	41.8	-	98.5	13.5	29.8	77.3	72.9	74.0	84.1	64.5
Food Waste	12.1	19.8	50.0	22.0	-	15.0	36.0	-	84.0	8.3	9.8	48.3	5.0	61.0	62.9	57.5
Yard Waste	18.5	-	7.0	-	-	8.0	2.5	-	8.0	-	6.0	19.0	62.0	-	18.3	-
Compostable Paper	-	-	31.0	4.0	-	3.3	3.3	-	6.5	5.3	14.0	10.0	5.9	13.0	3.0	7.0
HHW	0.7	23.0	1.9	-	-	0.5	2.1	-	2.3	0.7	-	1.5	1.0	-	0.5	0.9
Stewardship Products	-	23.0	0.3	-	-	0.5	1.8	-	-	-	-	0.5	-	-	-	-
Non-stewardship Products	0.7	-	1.6	-	-	-	0.3	-	2.3	0.7	-	1.0	1.0	-	0.5	0.9
C&D	30.8	22.5	23.0	1.5	-	26.5	18.3	5.3	8.0	32.3	24.3	4.5	5.0	-	1.8	5.0
Wood Waste (clean)	-	-	-	-	-	4.5	-	-	8.0	-	-	-	-	-	-	-
Wood Waste (dirty/coated)	30.8	11.5	23.0	1.0	-	13.0	8.0	5.3	-	2.5	4.3	3.5	5.0	-	-	5.0
Gypsum	-	10.0	-	-	-	0.3	3.0	-	-	-	20.0	-	-	-	-	-
Concrete, Brick, Asphalt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roofing	-	1.0	-	0.5	-	1.5	-	-	-	29.8	-	-	-	-	-	-
Misc. CD waste	-	-	-	-	-	7.3	7.3	-	-	-	-	1.0	-	-	1.8	-
Electronics	-	-	0.3	-	-	-	-	-	0.5	-	-	-	-	-	-	0.4
Audio Visual	-	-	0.3	-	-	-	-	-	0.5	-	-	-	-	-	-	-
Computer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
Miscellaneous	21.5	50.7	2.5	2.0	-	36.5	10.0	86.3	16.3	17.8	40.2	5.0	1.5	-	5.8	5.3
Carpet & Underlay	18.0	-	-	-	-	10.0	-	-	-	-	-	-	-	-	-	-
Mattresses	-	-	-	-	-	-	-	-	-	-	20.0	-	-	-	-	-
Small Appliances	-	4.0	-	-	-	-	-	4.5	-	-	1.0	0.3	-	-	-	-
Textiles	2.5	14.5	1.5	2.0	-	7.3	1.5	26.8	3.8	17.5	7.8	3.0	1.5	-	1.3	3.0
Rubber/Tires	-	-	-	-	-	6.5	-	-	-	-	0.9	-	-	-	-	-
Bulky Goods	-	30.0	-	-	-	8.0	-	44.0	-	-	-	-	-	-	-	-
Fines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diapers / Personal Hygiene	1.0	0.5	1.0	-	-	2.2	8.5	-	9.5	-	0.5	1.7	-	-	4.5	2.3
Other	-	1.7	-	-	-	2.5	-	11.0	3.0	0.3	10.0	-	-	-	-	-
Totals	100.3	140.1	135.7	51.3	125.0	126.3	124.1	124.0	149.6	107.6	134.5	122.1	134.4	141.9	114.0	107.8

Appendix A.

ICI Data Summary - RDN Waste Composition Study, Sept 27 - 30, 2004

Sample #17 kg	Sample #18 kg	Sample #19 kg	Sample #20 kg	Sample #21 kg	Sample #22 kg	Sample #23 kg	Sample #24 kg	Sample #25 kg	Sample #26 kg	Sample #27 kg	Sample #28 kg	Sample #29 kg	Sample #30 kg	Sample #31 kg	Sample #32 kg	Totals kg	Percentages
0.5	18.0	2.0	25.3	4.5	22.2	19.4	1.5	2.5	11.8	2.0	10.5	15.5	6.8	24.0	12.0	358.3	9.4%
-	8.0	2.0	10.3	-	3.0	-	0.5	-	2.5	-	-	10.0	4.6	16.0	0.5	91.8	2.4%
0.5	10.0	-	-	4.5	4.0	17.4	-	2.0	1.0	0.8	6.2	2.0	2.2	2.0	-	78.5	2.1%
-	-	-	15.0	-	15.2	2.0	1.0	0.5	8.3	1.3	4.3	3.5	-	6.0	11.5	188.0	4.9%
1.0	-	0.9	-	-	1.8	2.2	1.5	0.6	1.3	3.2	1.1	0.3	2.6	3.5	2.0	67.0	1.8%
0.8	-	0.8	-	-	-	2.2	1.5	0.6	0.8	-	1.1	-	2.6	3.0	2.0	29.5	0.8%
0.3	-	0.1	-	-	1.8	-	-	-	0.5	3.2	-	0.3	-	0.5	-	37.6	1.0%
4.5	-	3.8	7.5	22.0	45.2	30.8	4.5	16.5	2.1	3.0	5.0	8.5	0.9	7.3	0.8	247.3	6.5%
2.0	-	2.0	0.5	-	1.2	0.3	2.0	-	1.6	-	0.5	0.5	0.9	1.8	0.8	28.6	0.8%
2.5	-	1.8	7.0	22.0	44.0	30.5	2.5	16.5	0.5	3.0	4.5	8.0	-	5.5	-	218.7	5.7%
10.1	-	12.0	7.5	9.0	14.7	13.2	16.0	15.5	12.0	14.6	5.8	17.5	17.1	22.5	2.9	510.0	13.4%
2.0	-	2.5	-	-	-	5.4	2.5	12.5	3.3	0.3	0.3	1.0	3.3	2.5	0.5	90.7	2.4%
4.0	-	2.0	3.3	6.0	4.4	4.8	2.5	1.0	4.0	0.1	0.8	6.0	8.4	6.5	1.1	141.9	3.7%
4.1	-	7.5	4.3	3.0	10.3	3.0	11.0	2.0	4.8	14.3	4.8	10.5	5.4	13.5	1.3	277.4	7.3%
1.3	-	1.1	-	-	0.5	0.3	0.8	-	2.0	0.9	0.2	0.4	3.0	1.3	10.0	37.6	1.0%
0.5	-	0.1	-	-	0.5	0.3	0.3	-	1.4	0.8	0.2	0.3	2.8	0.8	9.5	27.3	0.7%
0.8	-	1.0	-	-	-	-	0.5	-	0.6	0.1	-	0.1	0.2	0.5	0.5	10.3	0.3%
93.8	7.4	67.8	56.5	85.5	23.0	46.7	86.3	1.0	96.8	10.0	16.5	16.5	89.4	58.0	2.0	1,503.9	39.5%
68.5	7.4	45.0	36.0	76.0	10.4	44.0	43.0	-	76.8	10.0	16.5	8.5	84.6	53.0	-	1,071.1	28.1%
18.0	-	12.8	20.5	-	12.6	-	36.3	1.0	12.3	-	-	-	0.5	-	-	263.1	6.9%
7.3	-	10.0	-	9.5	-	2.7	7.0	-	7.8	-	-	8.0	4.3	5.0	2.0	169.7	4.5%
0.3	-	-	1.5	-	-	0.3	1.0	-	0.3	-	0.5	0.8	0.1	0.3	0.8	40.8	1.1%
0.1	-	-	-	-	-	-	-	-	-	-	0.5	0.8	-	-	-	27.4	0.7%
0.3	-	-	1.5	-	-	0.3	1.0	-	0.3	-	-	0.0	0.1	0.3	0.8	13.4	0.4%
-	84.0	9.5	21.8	-	12.5	11.4	5.5	25.0	1.9	7.5	0.3	17.5	12.7	3.0	-	421.1	11.1%
-	-	0.8	12.3	-	-	11.0	-	21.0	1.8	-	-	5.5	3.2	0.5	-	68.6	1.8%
-	-	-	9.5	-	12.5	0.4	5.5	-	0.1	7.5	0.3	12.0	9.5	2.5	-	172.5	4.5%
-	77.0	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	112.8	3.0%
-	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0	0.2%
-	-	3.3	-	-	-	-	-	4.0	-	-	-	-	-	-	-	40.0	1.1%
-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	20.3	0.5%
-	-	-	0.4	-	10.3	1.0	-	-	-	2.0	0.8	0.4	7.3	-	-	23.2	0.6%
-	-	-	0.4	-	-	1.0	-	-	-	2.0	0.8	-	7.3	-	-	12.1	0.3%
-	-	-	-	-	10.3	-	-	-	-	-	-	0.4	-	-	-	11.1	0.3%
25.0	42.0	29.0	12.5	9.0	13.9	0.3	13.0	61.2	3.3	21.8	6.1	27.5	7.1	20.3	4.0	596.6	15.7%
-	-	-	2.5	-	-	-	-	13.0	-	-	-	5.9	-	-	-	49.4	1.3%
-	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45.0	1.2%
-	-	-	-	-	-	-	3.5	32.0	0.3	2.3	-	1.3	-	2.0	2.0	53.0	1.4%
4.3	12.0	4.5	8.0	9.0	8.7	0.3	9.5	1.2	3.0	19.5	5.8	10.3	4.0	16.3	0.8	210.7	5.5%
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	0.2%
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82.0	2.2%
-	-	-	-	-	-	-	-	15.0	-	-	-	-	-	-	1.3	16.3	0.4%
20.8	-	24.5	2.0	-	5.2	-	-	-	-	-	-	0.5	0.3	2.0	-	86.8	2.3%
-	5.0	-	-	-	-	-	-	-	-	-	0.3	9.6	2.8	-	-	46.0	1.2%
136.4	151.4	126.0	133.0	130.0	144.1	125.3	130.0	122.4	131.2	64.9	46.6	104.9	146.9	140.1	34.4	3,805.7	100.0%

Multi-Family Data - RDN Waste Composition Study, Sept 27 - 30, 2004

Waste Material	Sample #4 kg	Sample #12 kg	Totals kg	Percentages
Paper	22.5	10.3	19.3	11.1%
Old Newsprint (ONP)	7.0	1.3	8.3	4.8%
Old Corrugated Containers (OCC)	2.0	-	2.0	1.2%
Mixed Paper (MWP)	-	9.0	9.0	5.2%
Glass	5.1	8.0	10.1	5.8%
Food Containers	1.0	3.5	4.5	2.6%
Non-Container Glass	1.1	4.5	5.6	3.2%
Metal	10.0	2.4	6.4	3.7%
Food Containers	1.0	0.9	1.9	1.1%
Scrap Metal	3.0	1.5	4.5	2.6%
Plastic	14.4	11.3	17.0	9.8%
Rigid Containers	2.0	3.5	5.5	3.2%
Plastic Film	1.0	3.0	4.0	2.3%
Other Plastics	2.8	4.8	7.5	4.3%
Beverage Containers	2.5	2.0	3.0	1.7%
Deposit containers	-	1.3	1.3	0.7%
Milk containers	1.0	0.8	1.8	1.0%
Compostables	65.0	77.3	103.3	59.5%
Food Waste	22.0	48.3	70.3	40.5%
Yard Waste	-	19.0	19.0	11.0%
Compostable Paper	4.0	10.0	14.0	8.1%
HHW	-	1.5	1.5	0.9%
Stewardship Products	-	0.5	0.5	0.3%
Non-stewardship Products	-	1.0	1.0	0.6%
C&D	3.8	4.5	6.0	3.5%
Wood Waste (clean)	-	-	-	0.0%
Wood Waste (dirty/coated)	1.0	3.5	4.5	2.6%
Gypsum	-	-	-	0.0%
Concrete, Brick, Asphalt	-	-	-	0.0%
Roofing	0.5	-	0.5	0.3%
Misc. CD waste	-	1.0	1.0	0.6%
Electronics	-	-	-	0.0%
Audio Visual	-	-	-	0.0%
Computer	-	-	-	0.0%
Miscellaneous	5.0	5.0	7.0	4.0%
Carpet & Underlay	-	-	-	0.0%
Mattresses	-	-	-	0.0%
Small Appliances	-	0.3	0.3	0.1%
Textiles	2.0	3.0	5.0	2.9%
Rubber/Tires	-	-	-	0.0%
Bulky Goods	-	-	-	0.0%
Fines	-	-	-	0.0%
Diapers / Personal Hygiene	-	1.7	1.7	1.0%
Other	-	-	-	0.0%
Totals	128.3	122.1	173.4	100.0%

Appendix B

Material Categories

Solid Waste Categories

The following categories and material definitions were used to determine the composition of the solid waste in the Nanaimo Regional Landfill and Church Road Transfer Station.

PAPER

1. Old Newsprint (ONP) – Groundwood paper, used for newspapers, inserts and flyers.
2. Old Corrugated Containers (OCC) – Shipping boxes, kraft linerboard and containerboard cartons & brown paper bags.
3. Mixed Waste Paper (MWP) – Paper products including magazines and phone books and printing, writing, and computer paper

GLASS

4. Food Containers – Glass food containers including broken glass that could be clearly identified as food container glass (e.g. food jars and medicine bottles).
5. Non-Container Glass – All flat, pressed, blown and other non-recyclable glass including light bulbs, ceramics, window & auto glass. Includes all glass that cannot be readily identified as recyclable.

METAL

6. Food Containers – Metal food containers.
7. Scrap Metal – All other ferrous and non-ferrous materials.

PLASTIC

8. Rigid Plastic Containers – HDPE, PET, LDPE, PP.
9. Plastic Film – Clear film bags and shrink-wrap used to cover or protect product.
10. Other Plastics – Includes polystyrene (PS), and all mixed plastics (e.g. foam packing chips, plastic utensils and composite materials such as candy bar wrappers and chip bags).

COMPOSTABLES

11. Food Waste – Putrescible materials derived from the preparation and consumption of food and paper contaminated with food.
12. Yard Waste – Putrescible materials derived from yard and garden care (grass clippings).
13. Waste Paper – Paper that is not recyclable, but could be composted (tissues, paper towels).

BEVERAGE CONTAINERS

14. Deposit Containers – glass, plastic and metal containers that held ready to drink beverages (e.g. alcoholic and non-alcoholic beverages, excluding dairy and dairy substitute beverages) as defined by the *Beverage Container Stewardship Regulation*.
15. Non-Deposit Containers (Dairy) – any container that held dairy or dairy substitute beverages (e.g. HDPE milk jugs and bottles and aseptic packaging) as defined by the *Beverage Container Stewardship Regulation*.

Solid Waste Categories

HOUSEHOLD HAZARDOUS WASTE

16. Stewardship Products – includes paint and paint containers, pesticides, solvents, fuels, oil and oil bottles.
17. Non-stewardship Products – includes wastes that are that are ignitable, corrosive, reactive or toxic that not included in BC stewardship programs; bleach, liquid detergents, liquid household cleaners, brake fluid, transmission fluid, caustic agents, liquid poisons and liquid mercury.

CONSTRUCTION WASTE

18. Wood Waste (clean) – dimensional lumber derived from construction, remodelling, repair or demolition.
19. Wood Waste (dirty) – painted, treated wood.
20. Gypsum Wallboard
21. Concrete, Brick and Asphalt
22. Roofing Materials – asphalt shingles, tar and gravel.
23. Miscellaneous Construction Waste – fiberglass insulation, plastics, rubber.

ELECTRONIC WASTE

24. Computer – CPUs, monitors, keyboards and associated equipment.
25. Audio-Visual – stereos, televisions and associated equipment.

MISCELLANEOUS MATERIALS

26. Carpet and Underlay
27. Small Appliances – coffee makers, toasters other small appliances.
28. Textiles – Fabric materials including natural and synthetic textile products such as cotton, wool, silk, nylon, rayon, and polyester. Includes clothing, rags, curtains, bedding and other fabric materials.
29. Rubber / Tires – materials made from rubber and tires.
30. Bulky Goods / Mattresses – old furniture such as couches and chairs
31. Diapers / Personal Hygiene – diapers, sanitary pads and associated materials.
32. Fines – waste materials too small to be categorized (e.g. smaller than 2cm²).
33. Other – materials that could not otherwise be classified.

Appendix C

Statistical Analysis

Appendix C.
Summary Data - RDN Waste Composition Study Sept 27 - 30, 2004

Waste Material	kilograms								kilograms									
	Sample #1	Sample #2	Sample #3	Sample #4	Sample #5	Sample #6	Sample #7	Sample #8	Sample #9	Sample #10	Sample #11	Sample #12	Sample #13	Sample #14	Sample #15	Sample #16	Sample #17	Sample #18
Paper	7.3	5.3	9.5	9.0	30.0	10.0	21.0	8.3	5.0	13.8	6.3	10.3	13.0	14.8	11.3	5.5	0.5	18.0
Old Newsprint (ONP)	1.0	-	9.0	7.0	-	-	1.0	-	1.0	4.8	-	1.3	2.5	-	7.0	-	-	8.0
Old Corrugated Containers (OCC)	1.5	-	0.5	2.0	-	0.5	2.0	-	-	2.5	5.3	-	10.5	-	1.3	-	0.5	10.0
Mixed Paper (MWP)	4.8	5.3	-	-	30.0	9.5	18.0	8.3	4.0	6.5	1.0	9.0	-	14.8	3.0	5.5	-	-
Glass	0.6	1.5	-	2.1	-	7.9	4.9	12.3	3.1	0.8	1.9	8.0	-	-	1.5	0.8	1.0	-
Food Containers	0.6	-	-	1.0	-	1.7	2.2	-	2.8	0.4	1.5	3.5	-	-	0.3	0.4	0.8	-
Non-Container Glass	-	1.5	-	1.1	-	6.3	2.7	12.3	0.3	0.4	0.4	4.5	-	-	1.3	0.4	0.3	-
Metal	0.8	0.5	0.7	4.0	-	2.5	8.2	4.0	3.0	14.8	1.9	2.4	29.5	2.0	3.8	7.1	4.5	-
Food Containers	0.3	0.5	0.2	1.0	-	0.5	2.4	-	3.0	1.3	-	0.9	-	-	3.0	1.6	2.0	-
Scrap Metal	0.5	-	0.5	3.0	-	2.0	5.8	4.0	-	13.5	1.9	1.5	29.5	2.0	0.8	5.5	2.5	-
Plastic	7.8	16.6	8.5	5.8	95.0	15.5	16.6	8.0	11.5	10.7	29.5	11.3	11.5	50.1	3.8	17.8	10.1	-
Rigid Containers	2.0	4.0	1.0	2.0	7.5	6.5	1.8	-	2.0	0.3	5.0	3.5	9.5	5.0	0.8	4.0	2.0	-
Plastic Film	-	-	3.5	1.0	7.5	3.5	5.9	-	4.3	2.5	7.8	3.0	0.5	38.0	2.3	7.5	4.0	-
Other Plastics	5.8	12.6	4.0	2.8	80.0	5.5	9.0	8.0	5.3	8.0	16.8	4.8	1.5	7.1	0.8	6.3	4.1	-
Beverage Containers	0.4	0.4	1.3	1.0	-	0.7	1.4	-	1.5	3.4	0.9	2.0	-	1.0	1.6	0.7	1.3	-
Deposit containers	0.2	0.4	1.0	-	-	0.5	0.4	-	0.5	3.0	0.8	1.3	-	1.0	1.0	0.3	0.5	-
Milk containers	0.2	-	0.3	1.0	-	0.3	1.0	-	1.0	0.4	0.1	0.8	-	-	0.6	0.4	0.8	-
Compostables	30.6	19.8	88.0	26.0	-	26.3	41.8	-	98.5	13.5	29.8	77.3	72.9	74.0	84.1	64.5	93.8	7.4
Food Waste	12.1	19.8	50.0	22.0	-	15.0	36.0	-	84.0	8.3	9.8	48.3	5.0	61.0	62.9	57.5	68.5	7.4
Yard Waste	18.5	-	7.0	-	-	8.0	2.5	-	8.0	-	6.0	19.0	62.0	-	18.3	-	18.0	-
Compostable Paper	-	-	31.0	4.0	-	3.3	3.3	-	6.5	5.3	14.0	10.0	5.9	13.0	3.0	7.0	7.3	-
HHW	0.7	23.0	1.9	-	-	0.5	2.1	-	2.3	0.7	-	1.5	1.0	-	0.5	0.9	0.3	-
Stewardship Products	-	23.0	0.3	-	-	0.5	1.8	-	-	-	-	0.5	-	-	-	-	0.1	-
Non-stewardship Products	0.7	-	1.6	-	-	-	0.3	-	2.3	0.7	-	1.0	1.0	-	0.5	0.9	0.3	-
C&D	30.8	22.5	23.0	1.5	-	26.5	18.3	5.3	8.0	32.3	24.3	4.5	5.0	-	1.8	5.0	-	84.0
Wood Waste (clean)	-	-	-	-	-	4.5	-	-	8.0	-	-	-	-	-	-	-	-	-
Wood Waste (dirty/coated)	30.8	11.5	23.0	1.0	-	13.0	8.0	5.3	-	2.5	4.3	3.5	5.0	-	-	5.0	-	-
Gypsum	-	10.0	-	-	-	0.3	3.0	-	-	-	20.0	-	-	-	-	-	-	77.0
Concrete, Brick, Asphalt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0
Roofing	-	1.0	-	0.5	-	1.5	-	-	-	29.8	-	-	-	-	-	-	-	-
Misc. CD waste	-	-	-	-	-	7.3	7.3	-	-	-	-	1.0	-	-	1.8	-	-	-
Electronics	-	-	0.3	-	-	-	-	-	0.5	-	-	-	-	-	-	0.4	-	-
Audio Visual	-	-	0.3	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-
Computer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-
Miscellaneous	21.5	50.7	2.5	2.0	-	36.5	10.0	86.3	16.3	17.8	40.2	5.0	1.5	-	5.8	5.3	25.0	42.0
Carpet & Underlay	18.0	-	-	-	-	10.0	-	-	-	-	-	-	-	-	-	-	-	-
Mattresses	-	-	-	-	-	-	-	-	-	-	20.0	-	-	-	-	-	-	25.0
Small Appliances	-	4.0	-	-	-	-	-	4.5	-	-	1.0	0.3	-	-	-	-	-	-
Textiles	2.5	14.5	1.5	2.0	-	7.3	1.5	26.8	3.8	17.5	7.8	3.0	1.5	-	1.3	3.0	4.3	12.0
Rubber/Tires	-	-	-	-	-	6.5	-	-	-	-	0.9	-	-	-	-	-	-	-
Bulky Goods	-	30.0	-	-	-	8.0	-	44.0	-	-	-	-	-	-	-	-	-	-
Fines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diapers / Personal Hygiene	1.0	0.5	1.0	-	-	2.2	8.5	-	9.5	-	0.5	1.7	-	-	4.5	2.3	20.8	-
Other	-	1.7	-	-	-	2.5	-	11.0	3.0	0.3	10.0	-	-	-	-	-	-	5.0
Totals	100.3	140.1	135.7	51.3	125.0	126.3	124.1	124.0	149.6	107.6	134.5	122.1	134.4	141.9	114.0	107.8	136.4	151.4

Appendix C.
Summary Data - RDN Waste Composition Study Sept 27 - 30, 2004

Waste Material	kilograms														percentage						
	Sample #19	Sample #20	Sample #21	Sample #22	Sample #23	Sample #24	Sample #25	Sample #26	Sample #27	Sample #28	Sample #29	Sample #30	Sample #31	Sample #32	Sample #1	Sample #2	Sample #3	Sample #4	Sample #5	Sample #6	Sample #7
Paper	2.0	25.3	4.5	22.2	19.4	1.5	2.5	11.8	2.0	10.5	15.5	6.8	24.0	12.0	7%	4%	7%	18%	24%	8%	17%
Old Newsprint (ONP)	2.0	10.3	-	3.0	-	0.5	-	2.5	-	-	10.0	4.6	16.0	0.5	1%	0%	7%	14%	0%	0%	1%
Old Corrugated Containers (OCC)	-	-	4.5	4.0	17.4	-	2.0	1.0	0.8	6.2	2.0	2.2	2.0	-	1%	0%	0%	4%	0%	0%	2%
Mixed Paper (MWP)	-	15.0	-	15.2	2.0	1.0	0.5	8.3	1.3	4.3	3.5	-	6.0	11.5	5%	4%	0%	0%	24%	8%	15%
Glass	0.9	-	-	1.8	2.2	1.5	0.6	1.3	3.2	1.1	0.3	2.6	3.5	2.0	1%	1%	0%	4%	0%	6%	4%
Food Containers	0.8	-	-	-	2.2	1.5	0.6	0.8	-	1.1	-	2.6	3.0	2.0	1%	0%	0%	2%	0%	1%	2%
Non-Container Glass	0.1	-	-	1.8	-	-	-	0.5	3.2	-	0.3	-	0.5	-	0%	1%	0%	2%	0%	5%	2%
Metal	3.8	7.5	22.0	45.2	30.8	4.5	16.5	2.1	3.0	5.0	8.5	0.9	7.3	0.8	1%	0%	1%	8%	0%	2%	7%
Food Containers	2.0	0.5	-	1.2	0.3	2.0	-	1.6	-	0.5	0.5	0.9	1.8	0.8	0%	0%	0%	2%	0%	0%	2%
Scrap Metal	1.8	7.0	22.0	44.0	30.5	2.5	16.5	0.5	3.0	4.5	8.0	-	5.5	-	0%	0%	0%	6%	0%	2%	5%
Plastic	12.0	7.5	9.0	14.7	13.2	16.0	15.5	12.0	14.6	5.8	17.5	17.1	22.5	2.9	8%	12%	6%	11%	76%	12%	13%
Rigid Containers	2.5	-	-	-	5.4	2.5	12.5	3.3	0.3	0.3	1.0	3.3	2.5	0.5	2%	3%	1%	4%	6%	5%	1%
Plastic Film	2.0	3.3	6.0	4.4	4.8	2.5	1.0	4.0	0.1	0.8	6.0	8.4	6.5	1.1	0%	0%	3%	2%	6%	3%	5%
Other Plastics	7.5	4.3	3.0	10.3	3.0	11.0	2.0	4.8	14.3	4.8	10.5	5.4	13.5	1.3	6%	9%	3%	5%	64%	4%	7%
Beverage Containers	1.1	-	-	0.5	0.3	0.8	-	2.0	0.9	0.2	0.4	3.0	1.3	10.0	0%	0%	1%	2%	0%	1%	1%
Deposit containers	0.1	-	-	0.5	0.3	0.3	-	1.4	0.8	0.2	0.3	2.8	0.8	9.5	0%	0%	1%	0%	0%	0%	0%
Milk containers	1.0	-	-	-	-	0.5	-	0.6	0.1	-	0.1	0.2	0.5	0.5	0%	0%	0%	2%	0%	0%	1%
Compostables	67.8	56.5	85.5	23.0	46.7	86.3	1.0	96.8	10.0	16.5	16.5	89.4	58.0	2.0	31%	14%	65%	51%	0%	21%	34%
Food Waste	45.0	36.0	76.0	10.4	44.0	43.0	-	76.8	10.0	16.5	8.5	84.6	53.0	-	12%	14%	37%	43%	0%	12%	29%
Yard Waste	12.8	20.5	-	12.6	-	36.3	1.0	12.3	-	-	-	0.5	-	-	18%	0%	5%	0%	0%	6%	2%
Compostable Paper	10.0	-	9.5	-	2.7	7.0	-	7.8	-	-	8.0	4.3	5.0	2.0	0%	0%	23%	8%	0%	3%	3%
HHW	-	1.5	-	-	0.3	1.0	-	0.3	-	0.5	0.8	0.1	0.3	0.8	1%	16%	1%	0%	0%	0%	2%
Stewardship Products	-	-	-	-	-	-	-	-	-	0.5	0.8	-	-	-	0%	16%	0%	0%	0%	0%	1%
Non-stewardship Products	-	1.5	-	-	0.3	1.0	-	0.3	-	-	0.0	0.1	0.3	0.8	1%	0%	1%	0%	0%	0%	0%
C&D	9.5	21.8	-	12.5	11.4	5.5	25.0	1.9	7.5	0.3	17.5	12.7	3.0	-	31%	16%	17%	3%	0%	21%	15%
Wood Waste (clean)	0.8	12.3	-	-	11.0	-	21.0	1.8	-	-	5.5	3.2	0.5	-	0%	0%	0%	0%	0%	4%	0%
Wood Waste (dirty/coated)	-	9.5	-	12.5	0.4	5.5	-	0.1	7.5	0.3	12.0	9.5	2.5	-	31%	8%	17%	2%	0%	10%	6%
Gypsum	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	7%	0%	0%	0%	0%	2%
Concrete, Brick, Asphalt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%
Roofing	3.3	-	-	-	-	-	4.0	-	-	-	-	-	-	-	0%	1%	0%	1%	0%	1%	0%
Misc. CD waste	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%	0%	6%	6%
Electronics	-	0.4	-	10.3	1.0	-	-	-	2.0	0.8	0.4	7.3	-	-	0%	0%	0%	0%	0%	0%	0%
Audio Visual	-	0.4	-	-	1.0	-	-	-	2.0	0.8	-	7.3	-	-	0%	0%	0%	0%	0%	0%	0%
Computer	-	-	-	10.3	-	-	-	-	-	-	0.4	-	-	-	0%	0%	0%	0%	0%	0%	0%
Miscellaneous	29.0	12.5	9.0	13.9	0.3	13.0	61.2	3.3	21.8	6.1	27.5	7.1	20.3	4.0	21%	36%	2%	4%	0%	29%	8%
Carpet & Underlay	-	2.5	-	-	-	-	-	13.0	-	-	-	5.9	-	-	18%	0%	0%	0%	0%	8%	0%
Mattresses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%
Small Appliances	-	-	-	-	-	3.5	32.0	0.3	2.3	-	1.3	-	2.0	2.0	0%	3%	0%	0%	0%	0%	0%
Textiles	4.5	8.0	9.0	8.7	0.3	9.5	1.2	3.0	19.5	5.8	10.3	4.0	16.3	0.8	2%	10%	1%	4%	0%	6%	1%
Rubber/Tires	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%	0%	5%	0%
Bulky Goods	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	21%	0%	0%	0%	6%	0%
Fines	-	-	-	-	-	-	15.0	-	-	-	-	-	-	1.3	0%	0%	0%	0%	0%	0%	0%
Diapers / Personal Hygiene	24.5	2.0	-	5.2	-	-	-	-	-	-	0.5	0.3	2.0	-	1%	0%	1%	0%	0%	2%	7%
Other	-	-	-	-	-	-	-	-	-	0.3	9.6	-	-	-	0%	1%	0%	0%	0%	2%	0%
Totals	126.0	133.0	130.0	144.1	125.3	130.0	122.4	131.2	64.9	46.6	104.9	146.9	140.1	34.4	100%	100%	100%	100%	100%	100%	100%

Appendix C.
Summary Data - RDN Waste Composition Study Sept 27 - 30, 2004

Waste Material	percentage							percentage							percentage						
	Sample #8	Sample #9	Sample #10	Sample #11	Sample #12	Sample #13	Sample #14	Sample #15	Sample #16	Sample #17	Sample #18	Sample #19	Sample #20	Sample #21	Sample #22	Sample #23	Sample #24	Sample #25	Sample #26	Sample #27	Sample #28
Paper	7%	3%	13%	5%	8%	10%	10%	10%	5%	0%	12%	2%	19%	3%	15%	15%	1%	2%	9%	3%	22%
Old Newsprint (ONP)	0%	1%	4%	0%	1%	2%	0%	6%	0%	0%	5%	2%	8%	0%	2%	0%	0%	2%	0%	0%	0%
Old Corrugated Containers (OCC)	0%	0%	2%	4%	0%	8%	0%	1%	0%	0%	7%	0%	0%	3%	3%	14%	0%	2%	1%	1%	13%
Mixed Paper (MWP)	7%	3%	6%	1%	7%	0%	10%	3%	5%	0%	0%	0%	11%	0%	11%	2%	1%	0%	6%	2%	9%
Glass	10%	2%	1%	1%	7%	0%	0%	1%	1%	1%	0%	1%	0%	0%	1%	2%	1%	1%	1%	5%	2%
Food Containers	0%	2%	0%	1%	3%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	2%	1%	1%	1%	0%	2%
Non-Container Glass	10%	0%	0%	0%	4%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	5%	0%
Metal	3%	2%	14%	1%	2%	22%	1%	3%	7%	3%	0%	3%	6%	17%	31%	25%	3%	13%	2%	5%	11%
Food Containers	0%	2%	1%	0%	1%	0%	0%	3%	1%	1%	0%	2%	0%	0%	1%	0%	2%	0%	1%	0%	1%
Scrap Metal	3%	0%	13%	1%	1%	22%	1%	1%	5%	2%	0%	1%	5%	17%	31%	24%	2%	13%	0%	5%	10%
Plastic	6%	8%	10%	22%	9%	9%	35%	3%	16%	7%	0%	10%	6%	7%	10%	10%	12%	13%	9%	22%	12%
Rigid Containers	0%	1%	0%	4%	3%	7%	4%	1%	4%	1%	0%	2%	0%	0%	0%	4%	2%	10%	2%	0%	1%
Plastic Film	0%	3%	2%	6%	2%	0%	27%	2%	7%	3%	0%	2%	2%	5%	3%	4%	2%	1%	3%	0%	2%
Other Plastics	6%	4%	7%	12%	4%	1%	5%	1%	6%	3%	0%	6%	3%	2%	7%	2%	8%	2%	4%	22%	10%
Beverage Containers	0%	1%	3%	1%	2%	0%	1%	1%	1%	1%	0%	1%	0%	0%	0%	0%	1%	0%	1%	1%	0%
Deposit containers	0%	0%	3%	1%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%
Milk containers	0%	1%	0%	0%	1%	0%	0%	1%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Compostables	0%	66%	13%	22%	63%	54%	52%	74%	60%	69%	5%	54%	42%	66%	16%	37%	66%	1%	74%	15%	35%
Food Waste	0%	56%	8%	7%	40%	4%	43%	55%	53%	50%	5%	36%	27%	58%	7%	35%	33%	0%	58%	15%	35%
Yard Waste	0%	5%	0%	4%	16%	46%	0%	16%	0%	13%	0%	10%	15%	0%	9%	0%	28%	1%	9%	0%	0%
Compostable Paper	0%	4%	5%	10%	8%	4%	9%	3%	6%	5%	0%	8%	0%	7%	0%	2%	5%	0%	6%	0%	0%
HHW	0%	2%	1%	0%	1%	1%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	1%
Stewardship Products	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Non-stewardship Products	0%	2%	1%	0%	1%	1%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%
C&D	4%	5%	30%	18%	4%	4%	0%	2%	5%	0%	55%	8%	16%	0%	9%	9%	4%	20%	1%	12%	1%
Wood Waste (clean)	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	9%	0%	0%	9%	0%	17%	1%	0%	0%
Wood Waste (dirty/coated)	4%	0%	2%	3%	3%	4%	0%	0%	5%	0%	0%	0%	7%	0%	9%	0%	4%	0%	0%	12%	1%
Gypsum	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	51%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Concrete, Brick, Asphalt	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Roofing	0%	0%	28%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	3%	0%	0%	0%
Misc. CD waste	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Electronics	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	1%	0%	0%	0%	3%	2%
Audio Visual	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	3%	2%
Computer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%
Miscellaneous	70%	11%	17%	30%	4%	1%	0%	5%	5%	18%	28%	23%	9%	7%	10%	0%	10%	50%	2%	33%	13%
Carpet & Underlay	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	11%	0%	0%	0%
Mattresses	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Small Appliances	4%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	26%	0%	3%	0%
Textiles	22%	3%	16%	6%	2%	1%	0%	1%	3%	3%	8%	4%	6%	7%	6%	0%	7%	1%	2%	30%	12%
Rubber/Tires	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bulky Goods	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Fines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	0%	0%	0%
Diapers / Personal Hygiene	0%	6%	0%	0%	1%	0%	0%	4%	2%	15%	0%	19%	2%	0%	4%	0%	0%	0%	0%	0%	0%
Other	9%	2%	0%	7%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Totals	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Appendix C.
Summary Data - RDN Waste Composition Study Sept 27 - 30, 2004

Waste Material	percentage				Mean Percentage	Number of Samples	Standard Deviation	% Standard Deviation	Estimated Number of samples at 10% precision - 90% confidence	Estimated Number of samples at 20% precision - 90% confidence	% Confidence with which we can estimate the mean with 20% precision based on thirty-two samples	% Precision with which we can estimate the mean with 90% confidence based on thirty-two samples
	Sample #29	Sample #30	Sample #31	Sample #32								
Paper	15%	5%	17%	35%	10%	32	0.0782	75%	163	41	93	23
Old Newsprint (ONP)	10%	3%	11%	1%	3%	32	0.0369	146%	614	154	78	44
Old Corrugated Containers (OCC)	2%	1%	1%	0%	2%	32	0.0354	158%	716	179	76	47
Mixed Paper (MWP)	3%	0%	4%	33%	6%	32	0.0736	131%	495	124	80	39
Glass	0%	2%	2%	6%	2%	32	0.0240	122%	424	106	82	36
Food Containers	0%	2%	2%	6%	1%	32	0.0124	134%	517	129	80	40
Non-Container Glass	0%	0%	0%	0%	1%	32	0.0211	202%	1165	291	71	60
Metal	8%	1%	5%	2%	7%	32	0.0774	119%	406	101	83	36
Food Containers	0%	1%	1%	2%	1%	32	0.0079	98%	275	69	87	29
Scrap Metal	8%	0%	4%	0%	6%	32	0.0787	138%	547	137	79	41
Plastic	17%	12%	16%	8%	13%	32	0.1309	98%	273	68	87	29
Rigid Containers	1%	2%	2%	1%	2%	32	0.0233	100%	285	71	87	30
Plastic Film	6%	6%	5%	3%	4%	32	0.0467	133%	505	126	80	40
Other Plastics	10%	4%	10%	4%	8%	32	0.1113	147%	623	156	78	44
Beverage Containers	0%	2%	1%	29%	2%	32	0.0506	306%	2690	673	64	92
Deposit containers	0%	2%	1%	28%	1%	32	0.0484	365%	3819	955	62	109
Milk containers	0%	0%	0%	1%	0%	32	0.0045	137%	535	134	79	41
Compostables	16%	61%	41%	6%	38%	32	0.2467	65%	120	30	96	19
Food Waste	8%	58%	38%	0%	27%	32	0.2058	75%	162	40	93	22
Yard Waste	0%	0%	0%	0%	6%	32	0.1020	159%	725	181	76	48
Compostable Paper	8%	3%	4%	6%	4%	32	0.0468	107%	327	82	85	32
HHW	1%	0%	0%	2%	1%	32	0.0287	279%	2237	559	66	84
Stewardship Products	1%	0%	0%	0%	1%	32	0.0290	447%	5736	1434	60	134
Non-stewardship Products	0%	0%	0%	2%	0%	32	0.0055	145%	603	151	78	43
C&D	17%	9%	2%	0%	11%	32	0.1195	114%	371	93	84	34
Wood Waste (clean)	5%	2%	0%	0%	2%	32	0.0378	225%	1447	362	69	67
Wood Waste (dirty/coated)	11%	6%	2%	0%	5%	32	0.0646	140%	563	141	79	42
Gypsum	0%	0%	0%	0%	2%	32	0.0930	384%	4234	1059	61	115
Concrete, Brick, Asphalt	0%	0%	0%	0%	0%	32	0.0082	566%	9182	2295	58	169
Roofing	0%	0%	0%	0%	1%	32	0.0490	431%	5326	1331	60	129
Misc. CD waste	0%	0%	0%	0%	1%	32	0.0148	289%	2392	598	65	86
Electronics	0%	5%	0%	0%	1%	32	0.0158	264%	2006	501	66	79
Audio Visual	0%	5%	0%	0%	0%	32	0.0104	296%	2518	630	65	89
Computer	0%	0%	0%	0%	0%	32	0.0126	511%	7506	1876	59	153
Miscellaneous	26%	5%	14%	11%	16%	32	0.1583	101%	291	73	87	30
Carpet & Underlay	6%	0%	0%	0%	1%	32	0.0390	284%	2313	578	79	85
Mattresses	0%	0%	0%	0%	1%	32	0.0386	394%	4456	1114	81	118
Small Appliances	1%	0%	1%	6%	2%	32	0.0471	312%	2798	700	75	94
Textiles	10%	3%	12%	2%	6%	32	0.0664	111%	354	88	75	33
Rubber/Tires	0%	0%	0%	0%	0%	32	0.0091	503%	7252	1813	76	151
Bulky Goods	0%	0%	0%	0%	2%	32	0.0726	367%	3871	968	79	110
Fines	0%	0%	0%	4%	0%	32	0.0224	451%	5836	1459	76	135
Diapers / Personal Hygiene	0%	0%	1%	0%	2%	32	0.0441	212%	1284	321	76	63
Other	9%	2%	0%	0%	1%	32	0.0254	204%	1408	352	78	61
Totals	100%	100%	100%	100%	100%	32	0.0930	154%	898	224	81	46