

CAPITAL REGIONAL DISTRICT SOLID WASTE STREAM COMPOSITION STUDY 2009-2010

Final Report



PREPARED FOR: CAPITAL REGIONAL DISTRICT

PREPARED BY: SPERLING HANSEN ASSOCIATES

September 2010

PRJ09042



- Landfill Services
- Land Reclamation
- Corporate Management
- Groundwater Hydrogeology



**SPERLING
HANSEN
ASSOCIATES**

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-

Sept 1st, 2010

PRJ09042

Ms. Anke Bergner
Environmental Services Department
Capital Regional District
625 Fisgard Street
P.O. Box 1000
Victoria, B.C.
V8W 2S6

Dear Ms. Bergner

Re: Final Report for Solid Waste Composition Study.

We are pleased to submit to you our final report summarizing the results of two sampling rounds of the waste composition study conducted at the Hartland Landfill in 2009 and 2010.

We have enjoyed working with the CRD in conducting the study, and we believe that the information in this report will help the CRD in its efforts to improve its recycling and waste diversion programs.

Yours truly,
SPERLING HANSEN ASSOCIATES INC.

David Kvik M.Sc.
Environmental Scientist

Executive Summary

Since adopting the 50% waste reduction goal in 1991, the Capital Regional District (CRD) has commissioned four studies to analyze the waste composition in the Regional District. Two studies were completed by Cameron Advisory Services in 1990 and 1996, and the third and fourth studies were completed by Sperling Hansen Associates (SHA) in 2001, and 2004. The studies have provided valuable benchmark data and analysis for evaluating the success of the solid waste management programs. In August 2009 the CRD contracted SHA to conduct a fifth solid waste composition analysis at Hartland Landfill for the years 2009-2010. This report includes analysis and interpretation of the data collected during the two sorting periods (fall 2009 and spring 2010) completed in this study.

Objectives of the study included determining the overall waste composition by material type, characterizing the waste by generation sector (residential, ICI and DLC), and reviewing trends from different areas of the Regional District.

The most frequently encountered waste component was “Organic Waste” accounting for one third of all residuals. Second was “Paper and Paper Products” representing approximately 16% of the total waste stream. Third was “Plastics”, representing about 13% and the fourth most commonly found waste type was “Wood and Wood Products” at 10%. The remaining waste categories represented approximately 30% of the waste stream.

In terms of the waste disposal rates, it was calculated that each person within the Regional District was responsible for 414 kg of landfilled waste in 2009. Included in this total was 126 kg of “Organic Waste”, 69 kg of “Paper and Paper Products”, 54 kg of “Plastics” and 41 kg of “Wood and Wood Products”.

The waste category with the biggest change between the 2004 and 2009 studies was “Organic Waste” which saw a decrease in the disposal rate of 10.1 kg per person per year. The differences between the other categories were not large enough to be statistically significant in terms of waste disposal rates.

In general, waste from the residential and ICI sectors was relatively similar, with very similar distribution in the 14 main waste categories with only one category (“Paper and Paper Products”) that had a statistically significant difference. Residential waste had 15.5% of “Paper and Paper Products” while ICI had 21.2%. The main difference mainly stemmed from the ICI waste contained more tissue paper, paper towels and napkins.

The comparison between single family dwellings vs. apartments showed noticeably more “Composite Products” (mainly disposable diapers) in the waste from the single family dwellings compared to the apartments.

In the general waste stream, the three most common electronics products being disposed of were “Other Miscellaneous Consumer Electronics”, “Display Devices” followed by “Small Appliances”. These three categories accounted for over 70% of the electronics waste with annual disposal rates of 783, 753 and 545 tonnes per year respectively.

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1. INTRODUCTION

1.1 General Background

Since adopting the 50% waste reduction goal in 1991, the Capital Regional District (CRD) has commissioned four studies to analyze the waste composition in the Regional District. Two studies were completed by Cameron Advisory Services in 1990 and 1996, and the third and fourth studies were completed by Sperling Hansen Associates (SHA) in 2001, and 2004. The studies have provided valuable benchmark data and analysis for evaluating the success of the solid waste management programs. In August 2009 the CRD contracted SHA to conduct a fifth solid waste composition analysis at Hartland Landfill for the year 2009 and 2010. This report includes analysis and interpretation of the data collected during the two sorting periods (fall 2009 and spring 2010) in the study.

1.2 Objectives

The current study includes goals similar to those in the 2004 analysis plus requests for new information regarding the composition of solid waste destined for the Hartland landfill. In the competitive proposal call, the CRD highlighted the following objectives for this study:

- To determine the overall composition of the residual solid waste stream being deposited at Hartland Landfill by material type (sorted into 14 primary and 131 secondary categories).
- To provide the portion of residual solid waste being received from each of three basic waste generation sectors, namely the residential, industrial / commercial / institutional (ICI) and demolition / land-clearing / construction waste (DLC) sources.
- To characterize the residual waste composition by primary and secondary category in each of the three basic waste generation sectors.
- To profile the residual waste composition produced by apartments and condominiums in the Capital Regional District.
- To profile the residual waste composition produced from four residential areas also serviced by blue box recycling programs. Each of the four routes was pre-selected by the CRD within the four core communities.
- To determine the effectiveness of material bans implemented since the 2004 study.
- To produce a specific profile of plastics and household hazardous waste (HHW) being disposed of at Hartland Landfill through the general refuse.
- To identify changes in the nature of the solid waste generation by comparing the results of this study to previous solid waste audits.

The composition of the plastic waste stream is the object of special focus in the current study. The number of sub-categories in this field has been increased from 17, in the 2004 study, to 25 in this audit. The aim of this increase is to further define the composition of this waste stream by identifying the end use of each plastic. This study received financial support from several Industry Product Stewardship

Organizations (IPSOs): the BC Used Oil Management Association (BCUOMA), the Electronics Stewardship Association of British Columbia (ESABC), the Product Care Association (PCA) as well as the Canadian Plastics Industry Association (CPIA). Representatives from these groups observed the sampling process and have expressed an interest in the results.

2. METHODOLOGY

It was the intent of this study to utilize, where practical, the waste sorting methodology outlined in the Canadian Council of the Ministers of the Environment (CCME) guide titled “Recommended Waste Characterization Methodology for Direct Waste Analysis Studies in Canada”.

2.1 Staff, Equipment and Work Days

The sorting team consisted of a six-person team made up of Hartland Landfill staff as well as CRD Environmental Services temporary staff.



Photo 2-1. Sorting Crew and CRD Project Coordinator Anke Bergner.

Sperling Hansen Associates staff members were present for the first three days of the first sampling session and for one day during the spring sampling session. Sorting staff orientation and training was held on the first day of the sampling period. General methodology and health & safety training was

provided by SHA staff and additional safety awareness training was provided by Ms. Laraine Fowler, the CRD's Health and Safety Coordinator.

Equipment that was utilized during the sorting program included:

- Safety Equipment (first aid kit, portable CB radio on the Hartland Landfill frequency, portable eyewash, fire extinguisher).
- Protective Equipment (safety boots, Tyvek® overalls, rubber aprons, inner cotton or latex gloves, outer puncture resistant rubber gloves, dust masks and respirators, safety glasses, high visibility vests).
- 2 High-resolution electronic scales complete with power generator.
- 0.9 by 1.8 metre (3'x 6') sorting tables (5).
- 6.0 by 9.0 metre (20'x 30') tent to cover work area.
- Various sorting containers (120 L plastic totes, 70 L garbage cans, 50 L blue boxes).
- Rakes, brooms, shovels, scoops, utility knives for opening bags and sorting through materials.
- Backhoe with three way front bucket.

Sample sorting was conducted from Monday to Friday during normal landfill hours of operation.

2.2 Sampling Categories

Samples were sorted in accordance with the CCME classification system, with the exception of the household hazardous waste (HHW) and plastics categories. As mentioned previously, the CRD wanted to develop a more detailed profile of plastics and hazardous waste being disposed of at Hartland Landfill (than would be identified using the CCME classification system), and therefore additional plastics and hazardous waste secondary categories were added.

The changes in the Household Hazardous Waste categories reflect the changes that have occurred in the manufacture and distribution of potentially hazardous products available to the consumer today. The new survey has expanded the fluorescent lighting from 1 category to 2 (bulbs and tubes) in the new audit. "Rechargeable batteries" is another new category. Most of the other changes involve the participation of the Product Care Association (PCA) in the current survey. Whereas the 2005 audit had 4 categories for paints and solvents, this year's audit has expanded to 14. The PCA expressed an interest in a breakdown of the paint/solvent category to distinguish between PCA and non-PCA products, as well as full vs. empty PCA/non-PCA containers. The 2005 audit counted pesticides including containers and empty pesticide containers. The current survey differentiated between PCA and non-PCA pesticides and containers, expanding this category from 2 to 4 items.

The plastics category has expanded from 17 items in 2005 to 25 in this year's survey. This was previously a relatively easy category to sort but became more complicated in the 2009 audit. During the first days of the audit, the crew refined their sorting technique to identify the new categories. This year, sorting has been refined to identify not only the type of plastic, but also the end use of the product, differentiating between product packaging for grocery items, and take-out packaging. It was not always easy to determine the end use of the plastic items and the sorting crew did their best based on their experience, for example, they were asked to decide whether polyethylene grocery bags were used only once (for the trip from the store to the home) or re-used as garbage bags.

2.3 Sampling Methodology

To account for the seasonal variability of the waste stream, the sampling program was split into two sampling periods, the first period being from October 19th to November 17th, 2009, and the second from April 19th to May 14th 2010.

The aim of the study was to produce solid waste stream composition profiles for the entire waste stream entering the Hartland Landfill, for selected residential routes, for selected apartment and condominium buildings, and for ICI generators that were specified by the CRD. Experience from previous waste composition studies indicated that with a five to six person sorting crew, it would be possible to complete approximately 90 samples during a four-week period. During the first sorting session (fall 2009), the crew was able to complete a total of 102 samples rather than the targeted 90. The target for the number of samples in the spring sampling session was therefore increased to 100.

Out of the 90 targeted samples for the fall session, 8 samples were designated for the neighbourhood study, 20 samples were designated for the special study of apartment and condominiums, 6 samples for selected ICI generators, 3 for selected electoral areas, and 14 samples designated for the residential waste stream going to Hartland Landfill. The remaining 38 samples were designated for ICI and DLC loads entering the Hartland Landfill. This distribution was adjusted to accommodate 100 samples for the spring sampling session (see Table 2-1).

Table 2-1. Target Distribution of samples.

Category	Number of Samples Phase 1	Number of Samples Phase 2
Residential samples from pre-selected neighbourhoods.	8	8
Residential samples from pre-selected apartment buildings.	20	20
Residential samples based on tonnage to the landfill	14	16
Residential samples from pre-selected electoral areas.	3	6
ICI samples from pre-selected waste generators	7	7
ICI samples based on tonnage to the landfill	28	33
DLC samples based on tonnage to the landfill	10	10
Total	90	100

An assumption was made that approximately 50% of the waste received at the site comes from the residential sector, and the remaining 50% comes from the ICI and the DLC sectors.

In order to obtain the desired number of samples from each of the service areas, the generation sectors, and the special study areas, a list of targeted vehicles was prepared prior to commencement of the sampling period (see Table 2-3 and 2-4). This was periodically updated when new information was obtained throughout the course of the project.

The list was developed using scale data provided by the CRD, which provided a breakdown of waste haulers using the Hartland Landfill, and personal communication with the haulers that provided details on the actual sources and collection areas.

Whenever a target vehicle was identified by the team leader, the vehicle was directed to unload at a designated area to the side of the active face. Large or bulky items contained in the load were then removed from the load, while the remaining refuse was mixed using the excavator bucket of the backhoe to create a homogenized mixture. A representative sample weighing approximately 125 Kg was then extracted from the homogenized mixture using the three-way front bucket and delivered to the sorting table (see Photo 2-2). The details of the load, including the total load weight and the approximate weight of the oversized materials, were recorded on a sample data sheet (see Appendix A).

Collection and delivery of the loads from targeted apartments, condominiums and ICI generators that were part of the special study were contracted out to the companies that normally service the requested buildings or businesses.



Photo 2-2. Crew at work at the sorting table.

Table 2-2 Waste Sorting Categories

Primary Category	Secondary Category
Paper and Paperboard	Newsprint (including flyers)
	Magazines and mixed recyclable paper
	Corrugated cardboard
	Pizza boxes
	Waxed corrugated cardboard
	Boxboard
	Telephone books
	Books
	Fine paper (writing, computer, envelope, office)
	Tissue paper, paper towels, napkins
	Feminine Hygiene Products (sanitary napkins, tampons)
	Gabletop Cartons - Milk and Milk Substitutes
	Gabletop Cartons - Juice & Other
	Aseptic boxes - Milk and Milk Substitutes
	Aseptic boxes - Juice & Other
	Brown kraft paper, including bags
Paper Cups	
Other paper (non-recyclable), wall paper, shiny gift bags, frozen juice containers	
Glass	Beverage Containers - alcoholic
	Beverage Containers - non alcoholic
	Food Containers
	Other Glass Containers
	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)
Ferrous Metals	Beverage Containers - alcoholic
	Beverage Containers - non alcoholic
	Food Containers
	Large metal appliances (white goods)
	Other ferrous metals
Non-ferrous Metals	Beverage Containers - non alcoholic
	Beverage Containers - alcoholic
	Food Containers
	Aluminum trays & foil
	Other non-ferrous metals
Plastics	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)
	Bottles/Jugs - PET other bottles and jars (#1) (cooking oil, dish soap, peanut butter jars)
	Bottles/Jugs - HDPE beverage bottles (#2) (juice)
	Milk Jugs - HDPE
	Bottles/Jugs - HDPE other bottles and jugs (#2) (shampoo, windshield wash)
	Bottles/Jugs - PVC bottles and jars (#3) (lotions, soap, shampoo)
	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7) (ketchup, Tropicana Juice)
	Other Rigid Containers - PET Food take out (#1) (Mc D salad bowls...)
	Other Rigid Containers - PET Other food containers (#1)(Deli containers, berry containers, clamshells)
	Other Rigid Containers - #6 PS rigid take out (clear soft drink cups, sushi trays)
	Other Rigid Containers - #6 PS foam take out (clam shells, cups, soup bowls)
	Other Rigid Containers - #6 PS foam packaging (styrofoam, meat trays, egg cartons)
	Other Rigid Containers - #6 PS rigid packaging (Rx bottles, creamers, seedling trays)
	Other Rigid Containers - #5 PP wide mouth food take out (deli containers)
	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5) (dairy - ice cream, yogurt, sour cream)
	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L) (pails..)
	Other Rigid Containers - All other rigid plastic packages (blister packaging, plant pots, toothpaste, deodorant,
	Film Packaging - Polyethylene plastic bags and film - non carry-out bags (bread bags, produce bags, net bags)
	Film Packaging - Polyethylene retail and grocery carry-out bags empty
	Film Packaging - commercial stretch wrap (pallet wrap)
	Film Packaging - Laminates (vacuum sealed products, meat and fish wrap, cheese wrap, cereal liners, chip bags etc.)
	Film Non Packaging - Polyethylene retail and grocery carry-out bags -reused
Film Non Packaging - Polyethylene plastic bags and film (kitchen catchers, garbage bags, zip-lock, cling wrap)	
Durable Plastic Products - Non-packaging (VCR tapes, CDs, toys, Tupperware, garden hose, lawn furniture)	
Durable Plastic Products - Vinyl Siding etc.	
Organic Waste	Food waste - Backyard Compostable (raw fruit, egg shells, coffee filters and grounds, nuts)
	Food Waste - Kitchen Waste (cooked food, meat, seafood, dairy, pasta, bread, candies)
	Food Waste - FOG (Fats-Oil-Grease) - Brown grease (grease trap grease - sticky dirty grease)
	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease (cooking fat)
	Yard Waste (<3" diameter)
	Animal Faeces
	Other organic waste

Table 2-2 Waste Sorting Categories

Wood & Wood Products	Pallets/skids
	Wood shingles
	Wood furniture (>80% wood) (Accepted at wood waste bin)
	Other wood - Clean
	Other wood - Contaminated (painted, finished, treated)
Construction & Demolition Materials	Drywall
	Asphalt shingles
	Carpet & underlay
	Masonry (bricks, blocks, concrete, ceramic)
	Rock/sand/dirt
	Other C/D wastes
Textiles	Clothing
	Footwear
	Other textiles
Rubber	Vehicle tires
	Other rubber products
Composite Products	Disposable diapers
	Furniture
	Other composites, Q-tips.....
Hazardous Waste	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs
	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes
	Batteries - automotive (lead acid)
	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.
	Batteries - Rechargeable
	Oil - Lubricating (motor, transmission) oil, including containers
	Oil - Empty Lubricating (motor, transmission) oil containers
	Oil Filter - Automotive
	Paint - Latex, including containers, PCA (Product Care Association)
	Paint - Empty latex paint <u>containers</u> (PCA)
	Paint - Oil-based, including containers, (PCA)
	Paint - Empty oil based paint <u>containers</u> , (PCA)
	Paint - (non PCA) paint including container
	Paint - Empty (non PCA) <u>container</u>
	Paint in aerosol cans (PCA)
	Paint - Empty aerosol paint <u>cans</u> (PCA)
	Paint - Aerosol cans (non PCA)
	Paint - Empty aerosol paint <u>cans</u> (non PCA)
	Solvents including containers (<10L) (PCA)
	Solvents - Empty <u>containers</u> (PCA)
	Solvents including containers (non PCA)
	Solvents - Empty <u>containers</u> (non PCA)
	Pesticides including containers (<10L) (PCA)
	Pesticide - Empty pesticide <u>containers</u> , (PCA)
	Pesticides including containers (non PCA)
	Pesticide - Empty pesticide <u>containers</u> (non PCA)
	Pharmaceuticals, including containers
	Needles & Sharps
	Other empty aerosol cans (not applicable to above categories)
	Other hazardous waste (record description)
Electronics	Display Devices (monitors/TVs) less than 30"
	Display Devices (monitors/TVs) more than 30"
	Computers (desktops, laptops, desktop servers)
	Desktop Computer printers, copiers, faxes,
	Computer scanners
	Computer Peripherals (keyboards, mice)
	Personal/Portable audio/video playback and/or recording devices
	Vehicle audio/video devices
	Home audio/video playback and/or recording systems
	Non-cellular telephones and answering machines
	Cell phones, PDAs (Personal Digital Assistant) and pagers
	Other miscellaneous electronics - consumer
	Other miscellaneous electronics - commercial
	Small appliances
Other	Cat litter
	Non-distinct fines
	Other wastes, dental floss,

Table 2-3 Sample Distribution Phase 1 2009

RESIDENTIAL (Side Load)

AREA	FRACTION OF TOTAL WASTE RECEIVED AT LANDFILL (%)	NUMBER OF SAMPLES	HAULER
North Saanich	0.9	-	
Sidney	1.0	1	Town of Sidney
Central Saanich	1.4	1	Waste Management
Saanich	7.9	3	District of Saanich
Victoria	4.0	2	City of Victoria, Ellice Recycling
Oak Bay	1.6	1	District of Oak Bay
Esquimalt	1.1	1	Township of Esquimalt
View Royal	0.5	-	-
Colwood/Langford	4.5	2	Alpine
Sooke	0.4	1	Alpine
Transfer Station	3.8 (mixed)	2	On-site
Total		14	

ICI COLLECTION (FRONT LOAD)

HAULER	FRACTION OF TOTAL WASTE RECEIVED AT LANDFILL (%)	NUMBER OF SAMPLES	AREA
BFI Front End	14.6	3	Victoria, Oak Bay
		3	Victoria, Esquimalt
		3	Victoria, Saanich Peninsula
Waste Management	18.9	4	Victoria
		4	Saanich
		3	Saanich, Langford, Sidney
Alpine Disposal	10.7	1	Langford
		1	"
		1	"
		1	Victoria
		1	"
Hartland Bins (mixed)	3.8	3	
CRD selected ICI Generators		7	
Tot		35	

SPECIAL RESIDENTIAL

STUDY	AREA	NUMBER OF SAMPLES	HAULER
Neighbourhood	Oak Bay	2	District of Oak Bay
	Esquimalt	2	Town of Esquimalt
	Victoria	2	City of Victoria
	Saanich	2	District of Saanich
Apartment/Condominiums	Victoria	12	
	Saanich	2	
	Esquimalt	4	
	Other CRD	2	
Electoral Areas	Port Renfrew	1	
	Saltspring Island	1	
	Southern Golf Is.	1	
Total		31	

DLC COLLECTION

HAULER	FRACTION OF TOTAL WASTE RECEIVED AT LANDFILL (%)	NUMBER OF SAMPLES
HL Disposal	3.8	3
DL's Trucking and Bins	3.0	2
Parker Johnston	2.3	2
MacNutt Enterprises	0.8	1
Don Mann	0.5	1
Topline Roofing	0.2	1
Paninsula Disposal	0.1	-
Tot		10

Table 2-4 Sample Distribution Phase 2 2010

RESIDENTIAL (Side Load)

AREA	FRACTION OF TOTAL WASTE RECEIVED AT LANDFILL (%)	NUMBER OF SAMPLES	HAULER
North Saanich	1.0	-	
Sidney	1.1	-	Town of Sidney
Central Saanich	1.3	-	Waste Management
Saanich	9.3	6	District of Saanich
Victoria	4.6	3	City of Victoria, Ellice Recycling
Oak Bay	1.7	1	District of Oak Bay
Esquimalt	1.2	-	Township of Esquimalt
View Royal	0.5	-	-
Colwood/Langford	5.2	4	Alpine
Sooke	0.5	-	-
Hartland Bins (assumed 50/50)	2.4	2	On-site
Total		16	

ICI COLLECTION (FRONT LOAD)

HAULER	FRACTION OF TOTAL WASTE RECEIVED AT LANDFILL (%)	NUMBER OF SAMPLES	AREA
BFI Front End	15.2	3	Victoria, Oak Bay
		3	Victoria, Esquimalt
		4	Victoria, Saanich Peninsula
Waste Management	19.4	7	Victoria
		3	Saanich
		3	Saanich, Langford, Sidney
Alpine Disposal	10.9	4	Langford
		4	Victoria
Hartland Bins (assumed 50/50)	2.4	2	
CRD selected ICI Generators		7	
Total		40	

SPECIAL RESIDENTIAL

STUDY	AREA	NUMBER OF SAMPLES	HAULER
Neighbourhood	Oak Bay	2	District of Oak Bay
	Esquimalt	2	Town of Esquimalt
	Victoria	2	City of Victoria
	Saanich	2	District of Saanich
Apartment/Condominiums	Victoria	12	
	Saanich	2	
	Esquimalt	4	
	Other CRD	2	
Electoral Areas	Port Renfrew	1	
	Saltspring Island	3	
	Pender Island	1	
	Mayne Island	1	
Total		34	

DLC COLLECTION

HAULER	FRACTION OF TOTAL WASTE RECEIVED AT LANDFILL (%)	NUMBER OF SAMPLES
HL Disposal	2.80	3
DL's Trucking and Bins	2.61	3
Parker Johnston	1.00	1
MacNutt Enterprises	0.75	1
Paninsula Disposal	0.50	1
Island Floor	0.17	1
Don Mann	0.10	-
Hourigan Carpet	0.15	-
Sundial Flooring	0.12	-
Total		10

The ultimate approach, which proved to be very successful, consisted of sampling all materials directly into the 131 secondary categories. The keys to the success of this approach included:

- Assigning two staff members with the job of opening the bags, removing the more prominent (food waste, plastic bags) or bulky wood waste items such as wood waste, and pushing the remaining materials further up the table for additional sorting.
- Designating specific categories (e.g. rigid plastics, textiles) to one staff member and having that person organize the respective bins. As the remaining material was pushed down the table, each individual removed the items that fell within their categories.



Photo 2-3. Electronic items accumulated after seven days of sorting

Once the sort was completed, the material in each secondary class was weighed and recorded. Weights were entered into the master form for each sample (See Appendix A). Household Hazardous Waste items and electronic items were placed beside the sampling tent (See Photo 2-3) for inspection by industry stewards and the contents of the remaining bins were then discarded into a 40-yd³ bin for future disposal at the active face. All containers and sorting tables were then carefully cleaned in preparation for the next sample.

Typically, five samples were processed each working day. Samples from the residential waste stream usually took longer to sort, while samples of commercial refuse were easier to process because they

were more homogeneous. Visual sorts were conducted on loads that consisted of primarily one material (eg. asphalt/wood shingles), or of a series of oversized (easily discernable) materials.

Completed forms were periodically faxed to SHA’s office and the data was entered into Excel spreadsheets by Michael Wade, one of SHA’s Environmental Technologists. Special care was taken to ensure that the oversized or bulky items encountered in each load were taken into account.

3. WASTE SORTING RESULTS

3.1 Sample and Sorted Weights

There are two ways of reporting the extent of the waste sort program, based on sample weight and based on sorted weight. The sample weight is a measure of the quantity of material that was dumped at the specified location near the active face and was visually inspected by the sorting crew. The sorted weight is a measure of the quantity of material that was extracted from the sample material by the backhoe and sorted into the 131 secondary categories.

During the two sampling periods, 198 sample loads were diverted to the designated tipping area with a total weight of 1,121,260 kg (see Table 3-1); this represents 4.4% of the total waste accepted at the site during the course of the two sampling periods. From this total, 28,258 kg of material was extracted from the loads and manually sorted into the 131 categories, while 70,177 kg of material was visually sorted; this represents 0.3% of the total waste stream accepted at the site during the course of the two sampling periods. Visual sorts were conducted on loads that consisted of primarily one material (eg. asphalt/wood shingles), or of a series of oversized (easily discernable) materials.

Table 3-1. Total sample and sorted weights for both sampling periods.

	Total weight to landfill during sampling period (kg)	Total weight of sampled loads (kg)	Portion of waste stream sampled (%)	Total weight sorted (kg)
Manual Sort (N=181)	25,481,600	1,051,116	4.1	28,258
Visual Sort (N=17)	25,481,600	70,144	0.3	70,144
Total (N=198)	25,481,600	1,121,260	4.4	98,402

Garbage collection companies work with very tight schedules and only have room to accommodate deliveries of samples on days when they have specific trucks and drivers available, making it difficult to obtain the desired number of samples for the apartment and condominium study. Table 3-2 and Table 3-3 show the targeted and obtained number of samples for the two sampling rounds.

Table 3-2. Targeted and obtained number of samples phase 1 (fall 2009).

Category	Targeted Number of Samples	Obtained Number of Samples
Residential samples from pre-selected neighbourhoods.	8	8
Residential samples from pre-selected apartment buildings.	20	12
Residential samples based on tonnage to the landfill	14	30
Residential samples from three electoral areas	3	2
ICI samples from pre-selected waste generators	7	6
ICI samples based on tonnage to the landfill	28	36
DLC samples based on tonnage to the landfill	10	8
Total	90	102

Table 3-3. Targeted and obtained number of samples phase 2 (spring 2010).

Category	Targeted Number of Samples	Obtained Number of Samples
Residential samples from pre-selected neighbourhoods.	8	6
Residential samples from pre-selected apartment buildings.	20	12
Residential samples based on tonnage to the landfill	16	22
Residential samples from three electoral areas	6	6
ICI samples from pre-selected waste generators	7	9
ICI samples based on tonnage to the landfill	33	32
DLC samples based on tonnage to the landfill	10	9
Total	90	96

3.1.1 Statistical Analysis for Normalcy

Prior to applying the study results to the entire waste stream, a statistical analysis was completed to determine the normalcy of said results. Normalcy is determined through a comparison of the actual distribution of the data to an ideal Gaussian distribution.

When conducting a statistical analysis, the first three parameters that are traditionally calculated are the mean, the standard deviation (SD), and the coefficient of variation (COV). These are the base values from which normalcy is determined, but do not actually prove normalcy. The mean is the average of the data. The SD is a measure of variability subject to the value of the mean; the significance of the SD is that if the data follows a bell shaped Gaussian distribution, then 68% of the values lie within one SD of the mean (on either side) and 95% of the values lie within two SD of the mean. The problem with the SD is that, because it is subject to the value of the mean, the larger the mean the larger the possible SD (which can ultimately be misleading). The COV is simply the standard deviation divided by the mean; what the COV provides is a clear indication of the degree of variability expressed as a percent.

To assess the actual normalcy, the D'Agostino & Pearson (DP) test was used. The DP test quantifies the skewness and kurtosis of the sample data to quantify how far from Gaussian the distribution the data is in terms of asymmetry and shape. It then calculates how far each of these values differs from the value expected with a Gaussian distribution, and computes a single P value from the sum of these discrepancies.

The results of the Normalcy testing for each of the primary categories are summarized in Table 3-4. The results indicate that the only categories that were found to meet the normalcy requirements were "Organic Waste" and "Paper and Paper Products". What this means is that, for all of the other categories, care should be taken when inferring the study results to the entire waste stream, especially if the data is to be compared to historic or future results to map trends (i.e. used as an indication of effectiveness of recycling programs, etc.). The occurrences of the other waste components in the waste stream were too inconsistent for those categories to meet normality requirements.

3.2 Overall Waste Composition

Although used as the primary means of reporting results in past studies, waste composition data expressed in terms of "percentage of waste stream" does not lend itself to tracking changes in waste generation and waste composition. This is because diversion of one particular waste stream (e.g. glass beverage containers) results in a drop in the percentage of glass and a corresponding increase in the percentages of all other material categories. To address this problem, we report the sort results in three ways (see Table 3-5 and Appendix B (Table B-1):

- 1) Composition (percentage),
- 2) Waste disposal (tonnes/year), and
- 3) Waste generation (kg/person/day).

Table 3-4. Normalcy test for primary categories

Waste Category	Mean (%) N=198	S.D (%)	Coefficient of Variation	Passing Normality Test
Organic Waste	30.4	16.0	52	Yes
Paper and Paperboard	16.5	8.9	54	Yes
Plastics	13.1	6.8	52	No
Composite Products	9.9	21.8	220	No
Other	6.1	16.2	265	No
Textiles	5.5	5.1	92	No
Wood and Wood Products	5.2	4.8	94	No
Construction and Demolition	4.9	5.4	111	No
Ferrous Metal	2.4	3.4	145	No
Glass	1.9	1.9	99	No
Electronics	1.9	4.9	258	No
Hazardous Waste	0.8	1.7	219	No
Non-Ferrous Metal	0.7	2.3	332	No
Rubber	0.6	0.5	85	No
Total	100			

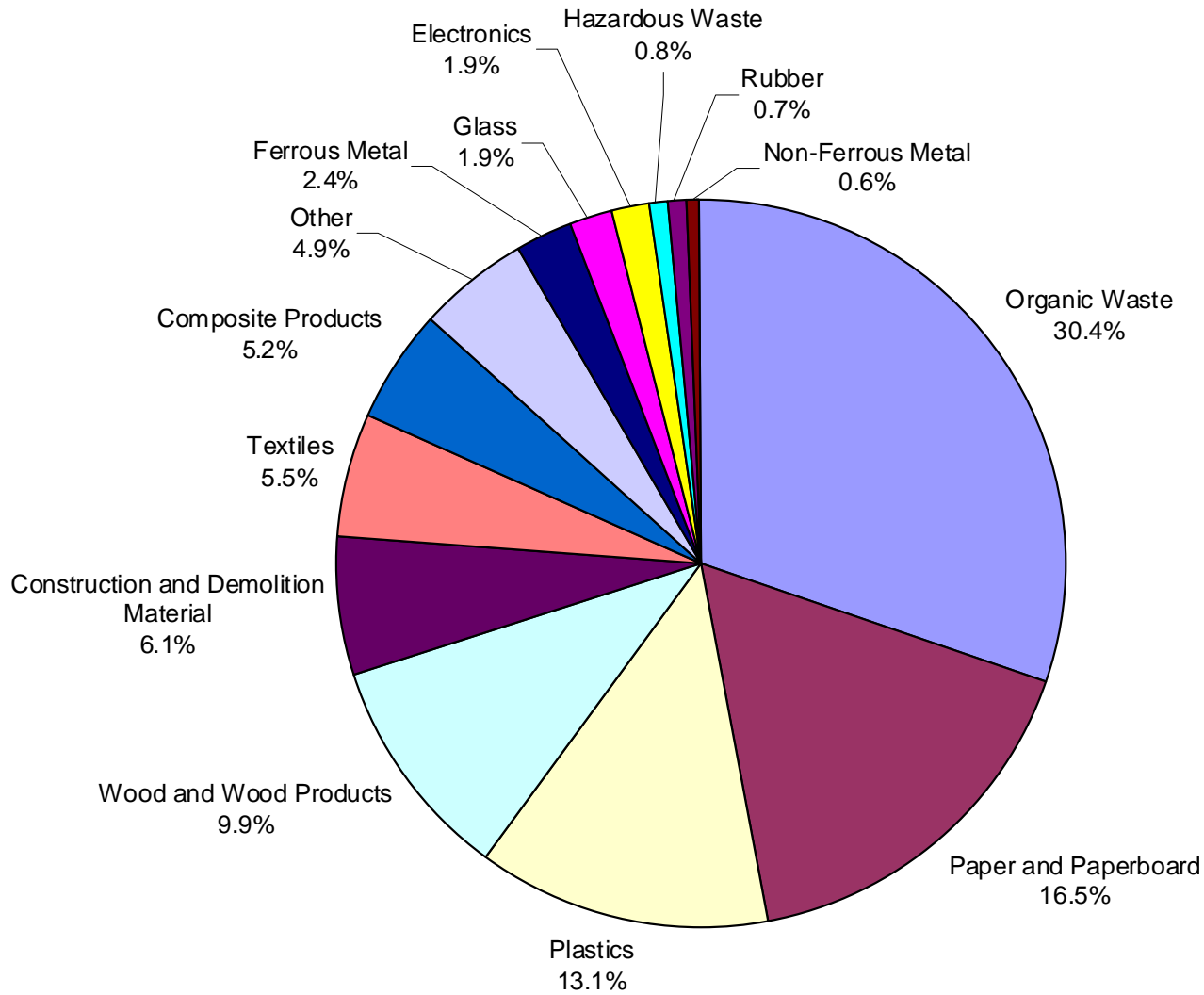
Table 3-5. Overall Waste Composition

Waste Category	Composition (%)	Waste Disposal Rate (Tonnes/year to landfill)	Waste Generation (kg/person/year)
Organic Waste	30.4	46,606	126.0
Paper and Paperboard	16.5	25,362	68.6
Plastics	13.1	20,059	54.2
Wood and Wood Products	9.9	15,225	41.2
Construction and Demolition	6.1	9,385	25.4
Textiles	5.5	8,441	22.8
Composite Products	5.2	7,931	21.4
Other	4.9	7,468	20.2
Ferrous Metal	2.4	3,638	9.8
Glass	1.9	2,974	8.0
Electronics	1.9	2,928	7.9
Hazardous Waste	0.8	1,179	3.2
Rubber	0.7	1,083	2.9
Non-Ferrous Metal	0.6	982	2.7
Total	100	153,263	414

The waste disposal rate for each category was calculated by multiplying the total annual tonnage landfilled in 2009 (153,263 tonnes of waste landfilled) with the composition (percentage) data from the waste sort. To calculate the waste generation rate, the respective disposal rates were divided by the 2009 population for the region (369,791 persons), as provided by CRD Regional Information Services.

In the above table, the categories are listed in order of decreasing weight. Organic waste was the most common category of solid waste encountered during the waste sort, accounting for one third of all residuals. Second was Paper and Paperboard, representing approximately 16% of the total waste stream. Third were Plastics, representing about 13%. Fourth category was Wood and Wood Products at 10%. The remaining waste categories represented 30% of the waste stream.

In terms of the waste generation rate, each person within the Regional District was responsible for 414 kg of landfilled waste in 2009. Included in this total was 126 kg of Organic Waste, 69 kg of Paper and Paper Products, 54 kg of Plastics and 41 kg of Wood and Wood Products. A detailed breakdown of each major waste category into subcategories is presented in Appendix B (Table B-1).



SPERLING
HANSEN
ASSOCIATES

PROJECT:

**CRD Solid Waste
Composition Study**

TITLE:

**Overall Waste
Composition 2009-2010**

SCALE:

N/A

DATE:

2010/08/25

yyyy/mm/dd

PROJECT NO:

PRJ09042

DESIGNED

DK

DRAWING NO:

DRAWN

DK

Figure 3-1

CHECKED

TS

3.3 Seasonal Variation

Table 3-6 shows the waste composition for the two sorting periods as well as the combined waste composition. As can be seen in the table, there were relatively small differences between the two sorting periods. The categories that had the large differences between the fall and the spring sorting periods were: “Organic Waste” (decreased 2.7%), “Wood and Wood Products” (increased 2.0%), and “Construction Waste (decreased 1.3%). It should be noted that these small differences fall within the normal variation between samples. As an example, the 95% confidence interval for “Organic Waste” for the entire data set ranged between 28.2% and 32.6% with no statistically significant difference between the two sorting periods. Even though it was not possible to prove whether or not there is a statistically valid difference between the sorting periods, it does not mean that there is none. Detailed results for each of the two sorting periods can be seen in Table B-2 in Appendix B.

Table 3-6. Comparison between the fall and the spring sampling periods.

Waste Category	Phase 1 Mean (%) N=102	Phase 2 Mean (%) N=96	Total Mean (%) N=198
Organic Waste	32.2	29.5	30.4
Paper and Paperboard	17.1	16.5	16.5
Plastics	12.9	13.8	13.1
Wood and Wood Products	8.2	10.2	9.9
Construction and Demolition Material	6.3	5.0	6.1
Textiles	5.7	5.5	5.5
Composite Products	5.7	4.7	5.2
Other	4.9	5.0	4.9
Ferrous Metal	1.9	2.9	2.4
Glass	1.7	2.2	1.9
Electronics	1.2	2.8	1.9
Hazardous Waste	0.8	0.7	0.8
Rubber	0.7	0.6	0.7
Non-Ferrous Metal	0.7	0.7	0.6
Total	100	100	100

3.4 Comparison to Previous Waste Composition Studies

Table 3-6 below shows a comparison of the waste generation rates between the 2001, 2004 and the 2009 studies. It should be noted the 2009 study had a separate category for electronics, while the 2001 and 2004 studies did not have a separate category for this. The generation rates for electronic waste was therefore subtracted from the composite category in 2001 and 2004 and added to the electronics category. Table 3-7 shows a comparison of the results for the primary categories from the 2001, 2004 and the 2009 studies. This comparison was based on the waste disposal rate per person per year rather than the total annual tonnage being disposed of at the landfill. Changes in the annual tonnage may have been caused by either changes in the number of people the site is serving or by changes in the disposal behavior of the population. Changes made to bylaws and/or recycling programs could be missed if only tonnage to the landfill was utilized.

As can be seen in Table 3-7 below, there have only been relatively minor changes in the waste disposal pattern over the past 9 years with no statistically significant changes between 2004 and 2009. The large change for the category “Other Waste” between 2001 and 2004 was likely a result of changes in the way the samples were sorted. The number of waste categories have increased significantly between 2001 and 2009 which most likely has caused the crew to spend less time sorting the unidentifiable waste that now end up in the catch-all category of “Other Waste”.

Table 3-7. Comparison of 2001, 2004 and 2009/2010 waste generation rates.

Waste Category	Waste Disposal 2001 (kg/pers/year)	Waste Disposal 2004 (kg/pers/year)	Waste Disposal 2009/2010 (kg/pers/year)	Difference in Disposal Rate 2004-2009 (kg/pers/year)
Organic Waste	134.9	136.7	126.0	-10.7
Paper and Paperboard	62.5	65.9	68.6	2.7
Plastics	53.9	54.9	54.2	-0.7
Wood and Wood Products	36.6	46.8	41.2	-5.6
Construction and Demolition Material	33.4	24.2	25.4	1.2
Textiles	15.2	18.3	22.8	4.5
Composite Products	20.8	25.9	21.4	-4.5
Other	7.6	16.8	20.2	3.4
Ferrous Metal	12.9	10.0	9.8	-0.2
Glass	9.2	7.4	8.0	0.6
Electronics	3.9	11.0	7.9	-3.1
Hazardous Waste	1.4	5.8	3.2	-2.6
Rubber	3.5	2.4	2.9	0.5
Non-Ferrous Metal	2.9	3.2	2.7	-0.5
Total	398.7	429.4	414.5	-14.9

4. WASTE COMPOSITION BY SECTOR

The objective of this chapter is to report the portion of residual solid waste being received from each of three basic waste generation sectors, namely the residential, industrial / commercial / institutional (ICI) and demolition / land-clearing / construction waste (DLC) sources, and to characterize the waste from each sector.

4.1 Waste Composition by Sector

During the sampling program, the sampling schedule was arranged such that, among other things, the percentage of samples collected from each sector matched the generation breakdown that had been determined in the evaluation of the scale data. For example, out of the 198 samples sorted during the project, 98 were to be from the residential sector, 83 from the ICI sector, and 17 from the DLC sector.

Table 4-1 and Appendix B (Table B-3) present the typical waste composition (reported as percent of the total sample) from each of the major waste generation sectors, as well as combined results for the entire waste stream.

Since the garbage collection companies collect garbage from both residential clients and from commercial clients during the same route, a number of samples came from loads containing refuse obtained from both sectors. The sector designation for these samples had to be determined by assessing the contents of the samples. A total of 10 samples were considered to consist of a mixture of residential and ICI refuse. The occurrence of components such as diapers, hygiene articles, construction materials, etc. were used to “re-label” these samples to an appropriate category.

Table 4-1. Waste Composition by Sector.

Waste Category	Residential Mean (%) N=98	ICI Mean (%) N=83	DLC Mean (%) N=17	Total Mean (%) N=198
Organics	34.6	31.7	0.0	30.4
Paper and Paperboard	15.5	21.2	0.0	16.5
Plastics	14.0	14.7	0.1	13.1
Wood and Wood Products	3.9	6.1	63.4	9.9
Construction and Demolition Material	3.4	3.2	35.9	6.1
Textiles	6.5	5.5	0.0	5.5
Composite Products	6.7	4.4	0.4	5.2
Other	6.6	3.8	0.0	4.9
Ferrous Metal	2.6	2.6	0.2	2.4
Glass	2.4	1.8	0.0	1.9
Electronics	1.8	2.5	0.0	1.9
Hazardous Waste	0.9	0.8	0.0	0.8
Rubber	0.4	1.2	0.0	0.7
Non-Ferrous Metal	0.8	0.5	0.0	0.6
Total (%)	100.0	100.0	100.0	100.0

In general, waste from the residential and ICI sectors is relatively similar, with very similar distribution in the 14 main waste categories with only one category (“Paper and Paper Products”) that had a statistically significant difference. Residential waste had 15.5% of “Paper and Paper Products” while ICI had 21.2%. The main difference mainly stemmed from more tissue paper, paper towels and napkins in the ICI waste.

DLC waste on the other hand is quite unique compared to waste from the other two sectors, with almost 99% of the refuse material falling in the “Wood and Wood Products” (63%), and in the “Construction and Demolition Material” (36%) categories. Primary subcategories include wood shingles (48%), asphalt shingles (21%), other clean wood (9%) and carpet and underlay (6%).

5. SPECIAL STUDIES

5.1 Apartment and Condominium Study

R.A. Malatest & Associates Ltd. recommended in the report “*Sampling for Apartment Study*” that in order to form a reliable picture of the waste stream created from apartments and condominiums in the Victoria area, a total of 20 buildings should be sampled with the distribution shown in Table 5-1. The sampled apartment buildings were selected from a database provided by the CRD. As shown in Table 5-2 and 5-3, it was not possible to collect samples from all recommended buildings due to logistical problems. The summary of the results from the waste sorts for the apartment and condominium study are provided in Table 5-4, and detailed results can be found in Appendix C (Table C-1).

Table 5-1. Apartment sample distribution as proposed by R.A. Malatest & Associates Ltd.

Area	5 to 9 units	10 to 49 units	50 and more units
CRD Total	1 building	10 buildings	9 buildings
Victoria	1	6	5
Saanich		2	2
Esquimalt		1	1
Oak Bay		-	-
Other CRD		1	1

Table 5-2. Completed sample distribution Phase 1 2009.

Area	5 to 9 units	10 to 49 units	50 and more units
CRD Total	1 building	6 buildings	7 buildings
Victoria	-	4	3
Saanich	-	-	1
Esquimalt	-	2	2
Oak Bay	-	-	-
Other CRD	-	1	-

Table 5-3. Completed sample distribution Phase 2 2010.

Area	5 to 9 units	10 to 49 units	50 and more units
CRD Total	1 building	6 buildings	7 buildings
Victoria	-	3	3
Saanich	-	-	1
Esquimalt	-	2	2
Oak Bay	-	-	-
Other CRD	-	1	-

Table 5-4. Composition of the waste stream from apartments and condominiums.

Waste Category	Victoria Mean (%) N=17	Saanich Mean (%) N=2	Esquimalt Mean (%) N=3	Oak Bay Mean (%) N=2	Total Mean (%) N=24
Organics	37.0	50.2	28.9	35.2	36.9
Paper and Paperboard	17.4	14.5	14.1	16.5	16.7
Plastics	13.3	14.9	9.8	13.7	13.0
Other	6.0	6.9	15.7	11.9	7.8
Textiles	6.9	5.4	4.5	2.1	6.1
Composite Products	4.5	2.1	5.1	5.1	4.4
Electronics	3.9	0.4	6.9	2.1	3.8
Glass	3.1	1.3	2.6	3.5	2.9
Ferrous Metal	1.9	1.4	10.2	2.2	2.9
Wood and Wood Products	3.0	1.0	0.1	0.0	2.2
Construction and Demolition Material	1.1	0.9	1.1	6.1	1.5
Non-Ferrous Metal	1.0	0.6	0.6	0.6	0.9
Hazardous Waste	0.8	0.1	0.4	0.8	0.7
Rubber	0.1	0.1	0.1	0.2	0.1
Total (%)	100.0	100.0	100.0	100.0	100.0

5.2 Neighbourhood Study

In order to create a waste composition profile for five residential areas which also are serviced by blue box recycling programs, five routes were pre-selected by the CRD within the five core communities, and individual samples were collected by the respective collection firms and brought directly to the landfill for sampling. Four samples were collected from residential collection routes in Victoria and Saanich, a total of three samples were collected from Oak Bay, two samples were collected from Esquimalt, and one sample was collected from View Royal.

Even though it could not be statistically validated since so few samples were collected from each area, it appears to be noticeably less organic waste in the waste from Oak Bay and View Royal. As can be seen in Table C-2, the Oak Bay and View Royal samples had noticeably less compostable waste. More than 14% of the View Royal sample consisted of animal feces and made up close to 50% of the organic fraction in that sample.

The results from these samples together with data from curbside recycling for the same collection routes will be used by the CDR to calculate the overall disposal and recycling rates for these neighborhoods. The details of the waste sorts for the neighborhood study are provided in Appendix C (Table C-2).

Table 5-5. Composition of the waste stream from single family dwellings.

Waste Category	Victoria Mean (%) N=4	Saanich Mean (%) N=4	Oak Bay Mean (%) N=3	View Royal Mean (%) N=1	Esquimalt Mean (%) N=2	Total Mean (%) N=14
Organics	44.8	41.2	32.9	33.1	40.1	39.7
Paper and Paperboard	13.1	13.7	15.5	11.4	16.2	14.1
Plastics	11.7	12.1	18.1	16.7	12.9	13.7
Composite Products	8.4	7.3	10.9	19.6	8.9	9.5
Other	10.3	7.6	9.9	12.7	9.1	9.4
Textiles	4.7	5.5	4.5	1.1	2.8	4.4
Construction and Demolition Material	0.8	4.9	2.2	0.0	2.8	2.5
Glass	3.0	1.7	2.3	0.5	3.1	2.3
Wood and Wood Products	0.9	1.9	1.1	0.0	1.6	1.3
Ferrous Metal	0.9	1.4	0.7	2.0	1.6	1.2
Non-Ferrous Metal	0.7	1.1	1.2	0.5	0.5	0.9
Electronics	0.4	0.5	0.4	2.0	0.0	0.5
Hazardous Waste	0.3	0.4	0.3	0.2	0.4	0.3
Rubber	0.0	0.6	0.1	0.0	0.0	0.2
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0

5.3 Electoral Areas

In addition to collecting samples from the waste stream from apartments, and urban single family residential areas, a total of eight samples were collected from four electoral areas. A total of four samples were collected from Salt Spring Island, two from Mayne Island and one sample was collected from both Port Renfrew and Pender Island. The results from the samples can be seen in Table C-3 in Appendix C. The variability in the waste composition between the samples was very big making it difficult to determine if the samples collected truly represent the waste being disposed off in the different areas. The combined waste composition for the eight samples from the electoral areas was very similar to that of the residential waste stream from the entire region. The only category that was statistically different from the overall residential waste stream was “Textile”. The overall residential waste stream consisted of 6.5% of textile, while the overall composition from the four electoral areas had 10.7% textile. Even though the difference was statistically valid, the higher percentage noted in the samples from the electoral areas was caused by a load from Port Renfrew which had close to 30% textiles.

5.4 Special ICI Study

One of the objectives for this waste composition study was to obtain information about materials received from a selected number of ICI generators. The CRD provided SHA with a list of selected businesses for sampling. Each sample was labeled ICI-1 to ICI-10 in order not to reveal the business identity.

A total of two samples were collected from ICI-1 to ICI-6, while one sample was collected from each of ICI-7, -8, -9 and -10. With only one or two samples taken from each business and the type of businesses ranging from a dentist office to a heavy industrial outfit it is difficult to draw any big of conclusions when comparing the results, but they provide some insight to what type of waste each business generates. The detailed results of the waste composition of these samples can be seen in Appendix D (Table D-1 and D-2).

5.5 Electronics

The electronics category has been added to this waste audit because of concern about quantities of electronic devices being disposed of in landfills and to measure the effectiveness of existing stewardship programs for certain electronics. Although electronics comprise less than 2% of overall waste composition in this study, it can potentially be hazardous to the environment, especially with heavy metals in electronic circuits and flame retardants in plastics.

Based on the 198 samples collected during this study, it was estimated that a total of 2,928 tonnes of electronics waste (1.9% of the waste stream) is being landfilled at Hartland Landfill every year. The most commonly found components were “Other miscellaneous consumer electronics” (783 tonnes per year), “Display Devices (<30”) (753 tonnes/year), followed by “Small appliances” (545 tonnes/year).

It should be pointed out that this category has extremely high variability and over estimates for larger items may occur. Extremely large items were counted as oversize objects and added as separate items to the entire load, while other items were included in the sorted sample and were weighted as any of the other waste components. Since these items are relatively rare, inclusion of an item in the sample can skew the results if it is not commonly found in the rest of the load

5.6 Recyclable Material

During the course of the this project, the CRD has collected data about the tonnages as well as the composition of the recyclable materials collected from several of the residential routes and apartments that were selected for the special study mentioned in sections 5.1-5.3. The recycling data collected to date was not analyzed or evaluated as part of this study as it needed further processing in order to fill in data gaps. The CRD intend to use the data collected in this waste composition study of disposed waste in combination with data collected from the recycling program at the CRD to create an overall picture of the total waste generation rate for the area.

6. CONCLUSIONS

This study provides valuable benchmark data and analysis for evaluating the success of the solid waste management programs and can be used as a valuable tool when planning for future waste reduction programs not only in the CRD, but also in other municipalities in BC.

The most frequently encountered waste component was “Organic Waste” accounting for one third of all residuals. Second was “Paper and Paper Products” representing approximately 16% of the total waste stream. Third was “Plastics”, representing about 13% and the fourth most commonly found waste type was “Wood and Wood Products” at 10%. The remaining waste categories represented 30% of the waste stream.

In terms of the waste disposal rates, each person within the Regional District was responsible for 414 kg of landfilled waste in 2009. Included in this total was 126 kg of “Organic Waste”, 69 kg of “Paper and Paper Products”, 54 kg of “Plastics” and 41 kg of “Wood and Wood Products”.

The category with the biggest change in the waste between the 2004 and 2009 studies was for “Organic Waste” which saw a decrease in the disposal rate of 10.1 kg per person per year. The differences between the other categories were not large enough to be statistically significant in terms of waste disposal rates.

In general, waste from the residential and ICI sectors is relatively similar, with very similar distribution in the 14 main waste categories with only one category (“Paper and Paper Products”) that had a statistically significant difference. Residential waste had 15.5% of “Paper and Paper Products” while ICI had 21.2%. The main difference mainly stemmed from more tissue paper, paper towels and napkins in the ICI waste.

The comparison between single family dwellings vs. apartments showed noticeably more “Composite Products” (disposable diapers) in the waste from the single family dwellings compared to the apartments. Even though not possibly to prove statistically, it appears that the waste from the apartments contains noticeably more “Electronics” than the waste from the single family dwellings. One theory for why this is could be that the recycling and /or the disposal bylaws are adhered to better at the single family dwellings as each owner is responsible for his/her own garbage can vs. the residents living in multi family dwellings dispose their refuse in a common bin used by other residents and therefore may not have the same drive to adhere to local bylaws.

In the general waste stream, the three most common electronics products being disposed of were “Other Miscellaneous Consumer Electronics”, “Display Devices” followed by “Small Appliances”. These three categories accounted for over 70% of the electronics waste with annual disposal rates of 783, 753 and 545 tonnes per year respectively.

7. LIMITATIONS

The waste composition analysis of solid waste residuals at Hartland Landfill has been prepared by Sperling Hansen Associates (SHA) on behalf of the Capital Regional District in accordance with generally accepted engineering practices. The report is based on 198 waste composition samples collected and analyzed by CRD staff over the course of eight weeks in 2009 and in 2010. The report documents our findings and conclusions based on this data.

The report is intended solely for the use of the Capital Regional District. SHA does not accept any responsibility for other uses of the material contained herein.

The report contains intellectual property developed and owned by SHA that has been made available to the Capital Regional District for exclusive use in charting the course of their solid waste management program. Copying of this intellectual property for other purposes is not permitted.

The interpretations presented in this report and the conclusions and recommendations that are drawn are based on information that was made available to SHA during the course of this project. Should additional new data become available in the future, SHA reserves the right to update the findings of this report and modify the conclusions and recommendations drawn, as required.

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Report reviewed by:



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Environmental Engineer

APPENDICES

APPENDIX A
Sample Sheets

SAMPLE LOAD DATA SHEET

<u>General Information</u>	Sample ID #: _____
Date: _____	Time: _____
Weather Conditions: _____	
Hauler: _____ Truck Number: _____ License: _____	
Res <input type="checkbox"/> ICI <input type="checkbox"/> DLC <input type="checkbox"/> Details: _____	
North Saanich <input type="checkbox"/> Sidney <input type="checkbox"/> Central Saanich <input type="checkbox"/> Saanich <input type="checkbox"/>	
Victoria <input type="checkbox"/> Oak Bay <input type="checkbox"/> Esquimalt <input type="checkbox"/> View Royal <input type="checkbox"/> Colwood <input type="checkbox"/>	
Metchosin <input type="checkbox"/> Sooke <input type="checkbox"/> Hartland <input type="checkbox"/> Other: _____	

<u>Scale Data</u>	Total Weight (Inbound): _____ kg	
	Total Weight (Outbound): _____ kg	
	Load Weight (In-out): _____ kg	

<u>Oversized Materials</u>	
Descriptor 1: _____	Weight: _____ kg
Descriptor 2: _____	Weight: _____ kg
Descriptor 3: _____	Weight: _____ kg
Descriptor 4: _____	Weight: _____ kg
Descriptor 5: _____	Weight: _____ kg
<u>Excess Moisture</u>	
Volume: _____ m ³ (approximate)	
Details: _____	
<u>Sample Material Description</u>	

<u>Signatures</u>	
Sample taken by: _____	Date: _____
Data sheet received by: _____	Date: _____

Filling out the “Sample Load Data Sheet”

GENERAL INFORMATION

Sample ID # - The identification number for the respective sample. Numbering to include sample day (1 to 20) and sample number that day (usually 1 to 6 samples per day) E.G. Sample ID #: 3-5 (day 3, sample 5)

Date - Date the sample arrived at the working face.

Time - Time the sample arrived at the working face.

Weather Conditions - Brief description of weather at the time the load was processed. Include details on temperature, cloud cover, level of precipitation.

Hauler - Name of hauler.

Truck Number – Identification number for the truck.

License # - License plate number for the truck.

Residential/ICI(Industrial/Commercial/Institutional)/DLC – specify what type of garbage is included within the load. May be that load contains both.

Details – add whatever relevant details are available for the load, such as collection area, major sources (DND/University), etc.

Mark off which areas the waste came from. May be from more than one area.

SCALE DATA

Obtain the inbound and outbound weights of the vehicle from the scale operator.

OVERSIZED MATERIALS

(This section applies if there is a large volume of particular material in a load. The material should be separated out and weight independently).

Descriptor: description of the material – try to follow the subcategory descriptors.

Weight: independent weight of the specific material.

EXCESS MOISTURE

(If large volumes of moisture are noted when the load is being dumped, try to estimate the volume of water. This may be the case if a bin has been sitting out open for a while).

SAMPLE MATERIAL DESCRIPTION

(Add general comments on how thorough the load was mixed when the sample was drawn. Also add general descriptors of the load, if something stands out)

SIGNATURE

Indicate who collected the sample at the active face.

ID #: _____

Secondary Category number & Descriptor		Tare Weight (kg)	Sample Weight (kg)	Material Weight (kg)
Category 1 - Paper & Paperboard				
1:1	Newsprint (including flyers)			
1:2	Magazines and mixed recyclable paper			
1:3	Corrugated cardboard			
1:4	Pizza boxes			
1:5	Waxed corrugated cardboard			
1:6	Boxboard			
1:7	Telephone books			
1:8	Books			
1:9	Fine paper (writing, computer, envelope, office)			
1:10	Tissue paper, paper towels, napkins			
1:11	Feminine Hygiene Products (sanitary napkins, tampons)			
1:12	Gabletop Cartons - Milk and Milk Substitutes			
1:13	Gabletop Cartons - Juice & Other			
1:14	Aseptic boxes - Milk and Milk Substitutes			
1:15	Aseptic boxes - Juice & Other			
1:16	Brown kraft paper, including bags			
1:17	Paper Cups			
1:18	Other paper (non-recyclable), wall paper, shiny gift bags, frozen juice containers			
Total Category Weight (kg)				
Category 2 - Glass				
2:1	Beverage Containers - alcoholic			
2:2	Beverage Containers - non alcoholic			
2:3	Food Containers			
2:4	Other Glass Containers			
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)			
Total Category Weight (kg)				
Category 3 - Ferrous Metals				
3:1	Beverage Containers - alcoholic			
3:2	Beverage Containers - non alcoholic			
3:3	Food Containers			
3:4	Large metal appliances (white goods)			
3:5	Other ferrous metals			
Total Category Weight (kg)				

Secondary Category number & Descriptor		Tare Weight (kg)	Sample Weight (kg)	Material Weight (kg)
Category 4 - Non-ferrous Metals				
4:1	Beverage Containers - non alcoholic			
4:2	Beverage Containers - alcoholic			
4:3	Food Containers			
4:4	Aluminum trays & foil			
4:5	Other non-ferrous metals			
Total Category Weight (kg)				
Category 5 - Plastics				
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)			
5:2	Bottles/Jugs - PET other bottles and jars (#1) (cooking oil, dish soap, peanut butter jars)			
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)			
5:4	Milk Jugs - HDPE			
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2) (shampoo, windshield wash)			
5:6	Bottles/Jugs - PVC bottles and jars (#3) (lotions, soap, shampoo)			
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7) (ketchup, Tropicana Juice)			
5:8	Other Rigid Containers - PET Food take out (#1) (Mc D salad bowls...)			
5:9	Other Rigid Containers - PET Other food containers (#1)(Deli containers, berry containers, clamshells)			
5:10	Other Rigid Containers - #6 PS rigid take out (clear soft drink cups, sushi trays)			
5:11	Other Rigid Containers - #6 PS foam take out (clam shells, cups, soup bowls)			
5:12	Other Rigid Containers - #6 PS foam packaging (styrofoam, meat trays, egg cartons)			
5:13	Other Rigid Containers - #6 PS rigid packaging (Rx bottles, creamers, seedling trays)			
5:14	Other Rigid Containers - #5 PP wide mouth food take out (deli containers)			
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5) (dairy - ice cream, yogurt, sour cream)			
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L) (pails..)			
5:17	Other Rigid Containers - All other rigid plastic packages (blister packaging, plant pots, toothpaste, deodorant,			
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags (bread bags, produce bags, net bags)			
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty			
5:20	Film Packaging - commercial stretch wrap (pallet wrap)			
5:21	Film Packaging - Laminates (vacuum sealed products, meat and fish wrap, cheese wrap, cereal liners, chip bags, bubble wrap)			
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags- reused			
5:23	Film Non Packaging - Polyethylene plastic bags and film (kitchen catchers, garbage bags, zip-lock, cling wrap, cookie bags)			
5:24	Durable Plastic Products - Non-packaging (VCR tapes, CDs, toys, Tupperware, garden hose, lawn furniture)			
5:25	Durable Plastic Products - Vinyl Siding			
Total Category Weight (kg)				
Category 6 - Organic Waste				
6:1	Food waste - Backyard Compostable (raw fruit, egg shells, coffee filters and grounds, nuts)			
6:2	Food Waste - Kitchen Waste (cooked food, meat, seafood, dairy, pasta, bread, candies)			
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease (grease trap grease - sticky dirty grease)			
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease (cooking fat)			
6:6	Yard Waste (<3" diameter)			
6:7	Animal Faeces			
6:8	Other organic waste			
Total Category Weight (kg)				

Secondary Category number & Descriptor		Tare Weight (kg)	Sample Weight (kg)	Material Weight (kg)
Category 7 - Wood & Wood Products				
7:1	Pallets/skids			
7:2	Wood shingles			
7:3	Wood furniture (>80% wood) (Accepted at wood waste bin)			
7:4	Other wood - Clean			
7:5	Other wood - Contaminated (painted, finished, treated)			
Total Category Weight (kg)				
Category 8 - Construction/Demolition Material				
8:1	Drywall			
8:2	Asphalt shingles			
8:3	Carpet & underlay			
8:4	Masonry (bricks, blocks, concrete, ceramic)			
8:5	Rock/sand/dirt			
8:6	Other C/D wastes			
Total Category Weight (kg)				
Category 9 - Textiles				
9:1	Clothing			
9:2	Footwear			
9:3	Other textiles			
Total Category Weight (kg)				
Category 10 - Rubber				
10:1	Vehicle tires			
10:2	Other rubber products			
Total Category Weight (kg)				
Category 11 - Composite Products				
11:1	Disposable diapers			
11:2	Furniture			
11:3	Other composites, Q-tips.....			
Total Category Weight (kg)				

Secondary Category number & Descriptor		Tare Weight (kg)	Sample Weight (kg)	Material Weight (kg)
Category 12 - Hazardous Wastes (RECORD UNITS AND VOLUME)				
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs			
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes			
12:3	Batteries - automotive (lead acid)			
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.			
12:5	Batteries - Rechargeable			
12:6	Oil - Lubricating (motor, transmission) oil, including containers(assess volume)			
12:7	Oil - Empty Lubricating (motor, transmission) oil containers (include number of units)			
12:8	Oil Filter - Automotive (include number of units)			
12:9	Paint - Latex, including containers, PCA (Product Care Association)			
12:10	Paint - Empty latex paint <u>containers</u> (PCA)			
12:11	Paint - Oil-based, including containers, (PCA)			
12:12	Paint - Empty oil based paint <u>containers</u> , (PCA)			
12:13	Paint - (non PCA) paint including container			
12:14	Paint - Empty (non PCA) <u>container</u>			
12:15	Paint in aerosol cans (PCA)			
12:16	Paint - Empty aerosol paint <u>cans</u> (PCA)			
12:17	Paint - Aerosol cans (non PCA)			
12:18	Paint - Empty aerosol paint <u>cans</u> (non PCA)			
12:19	Solvents including containers (<10L) (PCA)			
12:20	Solvents - Empty <u>containers</u> (PCA)			
12:21	Solvents including containers (non PCA)			
12:22	Solvents - Empty <u>containers</u> (non PCA)			
12:23	Pesticides including containers (<10L) (PCA)			
12:24	Pesticide - Empty pesticide <u>containers</u> (PCA)			
12:25	Pesticides including containers (non PCA)			
12:26	Pesticide - Empty pesticide <u>containers</u> (non PCA)			
12:27	Pharmaceuticals, including containers			
12:28	Needles & Sharps			
12:29	Other empty aerosol cans (not applicable to above categories)			
12:30	Other hazardous waste (record description)			
Total Category Weight (kg)				

Secondary Category number & Descriptor		Tare Weight (kg)	Sample Weight (kg)	Material Weight (kg)
Category 13 - Electronics (COUNT UNITS)				
13:1	Display Devices (monitors/TVs) less than 30"			
13:2	Display Devices (monitors/TVs) more than 30"			
13:3	Computers (desktops, laptops, desktop servers)			
13:4	Desktop Computer printers, copiers, faxes,			
13:5	Computer scanners			
13:6	Computer Peripherals (keyboards, mice)			
13:7	Personal/Portable audio/video playback and/or recording devices			
13:8	Vehicle audio/video devices			
13:9	Home audio/video playback and/or recording systems			
13:10	Non-cellular telephones and answering machines			
13:11	Cell phones, PDAs (Personal Digital Assistant) and pagers			
13:12	Other miscellaneous electronics - consumer			
13:13	Other miscellaneous electronics - commercial			
13:14	Small appliances			
Total Category Weight (kg)				
Category 14 - Other				
14:1	Cat litter			
14:2	Non-distinct fines			
14:3	Other wastes, dental floss,			
Total Category Weight (kg)				
Total Sample Weight (kg)				

Start Day: _____	Finished Day: _____
Start Time: _____	Finished Time: _____
Data Recorded By: _____	
Reviewed By: _____	

APPENDIX B
Detailed Result Tables
Waste Composition Overall and By Sector

Table B-1. Overall Waste Composition 2009-2010

		Waste Composition (Percentage)			Waste Generation (kg/pers/year)	Waste Disposal (tonnes/year)
		Mean (N=198)	S.D. (%)	C.O.V (%)	Mean (N=198)	Mean (N=198)
Category 1 - Paper and Paperboard						
1:1	Newsprint (including flyers)	1.45	2.58	177	6.02	2,226
1:2	Magazines and mixed recyclable paper	2.57	2.86	111	10.65	3,939
1:3	Corrugated cardboard	1.04	1.47	141	4.30	1,589
1:4	Pizza boxes	0.18	0.42	241	0.73	269
1:5	Waxed corrugated cardboard	0.40	1.78	439	1.66	614
1:6	Boxboard	1.36	0.96	71	5.65	2,090
1:7	Telephone books	0.06	0.30	532	0.23	85
1:8	Books	0.19	0.70	371	0.79	293
1:9	Fine paper	0.42	0.92	218	1.72	637
1:10	Tissue paper, paper towels, napkins	5.34	4.53	85	22.12	8,181
1:11	Feminine Hygiene Products	0.34	1.38	409	1.40	518
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.43	0.65	152	1.79	662
1:13	Gabletop Cartons - Juice & Other	0.04	0.11	317	0.15	54
1:14	Aseptic boxes - Milk and Milk Substitutes	0.06	0.10	160	0.27	99
1:15	Aseptic boxes - Juice & Other	0.07	0.09	132	0.30	110
1:16	Brown kraft paper, including bags	0.45	0.58	129	1.85	684
1:17	Paper Cups	0.76	1.00	132	3.14	1,161
1:18	Other paper (non-recyclable)	1.40	1.28	91	5.82	2,151
Category 1 - Paper and Paperboard		16.55	8.83	53	68.58	25,362
Category 2 - Glass						
2:1	Beverage Containers - alcoholic	0.31	0.66	215	1.27	469
2:2	Beverage Containers - non alcoholic	0.11	0.24	211	0.47	173
2:3	Food Containers	0.52	0.61	116	2.18	804
2:4	Other Glass Containers	0.08	0.27	351	0.33	123
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	0.92	1.39	151	3.80	1,404
Category 2 - Glass		1.94	1.91	99	8.04	2,974
Category 3 - Ferrous Metals						
3:1	Beverage Containers - alcoholic	0.01	0.19	1,319	0.06	22
3:2	Beverage Containers - non alcoholic	0.01	0.06	763	0.03	11
3:3	Food Containers	0.50	0.48	98	2.06	760
3:4	Large metal appliances (white goods)	0.00	0.00	-	0.00	0
3:5	Other ferrous metals	1.86	3.40	182	7.69	2,845
Category 3 - Ferrous Metals		2.37	3.43	144	9.84	3,638
Category 4 - Non-ferrous Metals						
4:1	Beverage Containers - non alcoholic	0.06	0.10	163	0.25	94
4:2	Beverage Containers - alcoholic	0.05	0.13	269	0.20	74
4:3	Food Containers	0.04	0.13	305	0.18	67
4:4	Aluminum trays & foil	0.34	0.33	96	1.41	523
4:5	Other non-ferrous metals	0.15	0.37	254	0.61	224
Category 4 - Non-ferrous Metals		0.64	0.54	85	2.66	982

Table B-1. Overall Waste Composition 2009-2010

		Waste Composition (Percentage)			Waste Generation (kg/pers/year)	Waste Disposal (tonnes/year)
		Mean (N=198)	S.D. (%)	C.O.V (%)	Mean (N=198)	Mean (N=198)
Category 5 - Plastics						
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.15	0.20	128	0.63	234
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.22	0.23	105	0.91	336
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.04	0.06	159	0.15	54
5:4	Milk Jugs - HDPE	0.10	0.17	160	0.43	161
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.38	0.33	88	1.57	580
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.02	0.07	339	0.09	32
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.12	0.18	159	0.48	177
5:8	Other Rigid Containers - PET Food take out (#1)	0.03	0.08	227	0.14	51
5:9	Other Rigid Containers - PET Other food containers (#1)	0.25	0.25	99	1.05	387
5:10	Other Rigid Containers - #6 PS rigid take out	0.38	0.37	97	1.58	585
5:11	Other Rigid Containers - #6 PS foam take out	0.14	0.45	315	0.59	218
5:12	Other Rigid Containers - #6 PS foam packaging	0.68	0.71	104	2.82	1,044
5:13	Other Rigid Containers - #6 PS rigid packaging	0.15	0.21	136	0.64	236
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.12	0.48	403	0.49	182
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.30	1.00	335	1.24	459
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.21	0.52	253	0.85	316
5:17	Other Rigid Containers - All other rigid plastic packages	0.37	0.34	92	1.53	565
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.23	0.31	133	0.95	352
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.16	0.17	101	0.68	251
5:20	Film Packaging - commercial stretch wrap	0.17	0.46	272	0.70	259
5:21	Film Packaging - Laminates	3.42	4.05	118	14.19	5,248
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags - reused	0.63	0.89	141	2.61	965
5:23	Film Non Packaging - Polyethylene plastic bags and film	2.96	1.74	59	12.28	4,540
5:24	Durable Plastic Products - Non-packaging	1.83	1.83	100	7.59	2,808
5:25	Durable Plastic Products - Vinyl Siding	0.01	0.12	874	0.06	21
Category 5 - Plastics		13.09	6.77	52	54.25	20,059
Category 6 - Organic Waste						
6:1	Food waste - Backyard Compostable	7.98	7.36	93	33.07	12,229
6:2	Food Waste - Kitchen Waste	16.45	10.65	65	68.19	25,218
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.23	3.21	1,396	0.94	348
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.02	0.12	605	0.08	29
6:6	Yard Waste (<3" diameter)	3.35	6.09	181	13.90	5,139
6:7	Animal Faeces	1.47	5.39	373	6.11	2,258
6:8	Other organic waste	0.90	2.44	269	3.74	1,385
Category 6 - Organic Waste		30.41	15.82	52	126.03	46,606
Category 7 - Wood and Wood Products						
7:1	Pallets/skids	0.63	6.47	1,011	2.63	971
7:2	Wood shingles	4.12	19.02	457	17.08	6,314
7:3	Wood furniture (>80% wood)	0.58	2.43	415	2.40	887
7:4	Other wood - Clean	2.33	8.87	377	9.65	3,569
7:5	Other wood - Contaminated	2.27	4.27	190	9.42	3,483
Category 7 - Wood and Wood Products		9.93	21.82	218	41.17	15,225
Category 8 - Construction/Demolition Material						
8:1	Drywall	0.18	0.79	432	0.75	278
8:2	Asphalt shingles	2.05	10.52	664	8.49	3,138
8:3	Carpet & underlay	1.81	7.60	416	7.50	2,773
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.17	0.93	525	0.72	268
8:5	Rock/sand/dirt	0.55	6.76	1,221	2.27	840
8:6	Other C/D wastes	1.36	3.27	237	5.65	2,089
Category 8 - Construction/Demolition Material		6.12	14.92	262	25.38	9,385

Table B-1. Overall Waste Composition 2009-2010

		Waste Composition (Percentage)			Waste Generation (kg/pers/year)	Waste Disposal (tonnes/year)
		Mean (N=198)	S.D. (%)	C.O.V (%)	Mean (N=198)	Mean (N=198)
Category 9 - Textiles						
9:1	Clothing	2.10	2.70	129	8.71	3,219
9:2	Footwear	0.61	0.92	151	2.52	933
9:3	Other textiles	2.80	2.96	105	11.60	4,289
Category 9 - Textiles		5.51	5.06	92	22.83	8,441
Category 10 - Rubber						
10:1	Vehicle tires	0.04	0.43	1,204	0.15	54
10:2	Other rubber products	0.67	2.25	331	2.78	1,029
Category 10 - Rubber		0.71	2.35	329	2.93	1,083
Category 11 - Composite Products						
11:1	Disposable diapers	3.28	4.46	137	13.61	5,032
11:2	Furniture	0.61	1.93	315	2.52	930
11:3	Other composites, Q-tips.....	1.28	2.05	159	5.33	1,969
Category 11 - Composite Products		5.18	5.01	97	21.45	7,931
Category 12 - Hazardous Wastes						
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.0022	0.02	1,017	0.01	3
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.05	0.72	1,396	0.21	79
12:3	Batteries - automotive (lead acid)	0.0011	0.01	1,029	0.00	2
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.1150	0.52	455	0.48	176
12:5	Batteries - Rechargeable	0.0031	0.03	856	0.01	5
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.0147	0.17	1,117	0.06	23
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.0527	0.37	686	0.22	81
12:8	Oil Filter - Automotive (include number of units)	0.0147	0.13	896	0.06	23
12:9	Paint - Latex, including containers, PCA	0.0372	0.19	528	0.15	57
12:10	Paint - Empty latex paint containers (PCA)	0.0131	0.07	527	0.05	20
12:11	Paint - Oil-based, including containers, (PCA)	0.0535	0.50	926	0.22	82
12:12	Paint - Empty oil based paint containers, (PCA)	0.0077	0.06	726	0.03	12
12:13	Paint - (non PCA) paint including container	0.0056	0.05	904	0.02	9
12:14	Paint - Empty (non PCA) container	0.0007	0.01	991	0.00	1
12:15	Paint in aerosol cans (PCA)	0.0007	0.01	994	0.00	1
12:16	Paint - Empty aerosol paint cans (PCA)	0.0135	0.10	746	0.06	21
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	-	0.00	0
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	1,396	0.00	0
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	-	0.00	0
12:20	Solvents - Empty containers (PCA)	0.0150	0.14	947	0.06	23
12:21	Solvents including containers (non PCA)	0.0044	0.05	1,195	0.02	7
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	-	0.00	0
12:23	Pesticides including containers (<10L) (PCA)	0.0015	0.02	1,396	0.01	2
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	-	0.00	0
12:25	Pesticides including containers (non PCA)	0.00	0.00	-	0.00	0
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	1,396	0.00	0
12:27	Pharmaceuticals, including containers	0.0328	0.15	445	0.14	50
12:28	Needles & Sharps	0.0069	0.04	531	0.03	11
12:29	Other empty aerosol cans (not applicable to above categories)	0.1362	0.23	167	0.56	209
12:30	Other hazardous waste (record description)	0.1850	1.13	605	0.77	284
Category 12 - Hazardous Wastes		0.769	1.69	219	3.19	1,179

Table B-1. Overall Waste Composition 2009-2010

		Waste Composition (Percentage)			Waste Generation (kg/pers/year)	Waste Disposal (tonnes/year)
		Mean	S.D.	C.O.V	Mean	Mean
		(N=198)	(%)	(%)	(N=198)	(N=198)
Category 13 - Electronics						
13:1	Display Devices (monitors/TVs) less than 30"	0.49	3.94	793	2.04	753
13:2	Display Devices (monitors/TVs) more than 30"	0.01	0.07	1,396	0.02	8
13:3	Computers (desktops, laptops, desktop servers)	0.09	0.50	541	0.38	141
13:4	Desktop Computer printers, copiers, faxes,	0.14	0.81	554	0.60	221
13:5	Computer scanners	0.00	0.00	-	0.00	0
13:6	Computer Peripherals (keyboards, mice)	0.02	0.09	548	0.07	24
13:7	Personal/Portable audio/video playback and/or recording devices	0.119	0.64	536	0.49	182
13:8	Vehicle audio/video devices	0.01	0.09	1,396	0.03	10
13:9	Home audio/video playback and/or recording systems	0.08	0.55	688	0.33	121
13:10	Non-cellular telephones and answering machines	0.01	0.08	636	0.05	20
13:11	Cell phones, PDAs and pagers	0.01	0.04	549	0.03	11
13:12	Other miscellaneous electronics - consumer	0.51	1.14	222	2.12	783
13:13	Other miscellaneous electronics - commercial	0.07	0.44	617	0.29	109
13:14	Small appliances	0.36	1.84	513	1.47	545
Category 13 - Electronics		1.91	4.92	255	7.92	2,928
Category 14 - Other						
14:1	Cat litter	2.78	4.84	176	11.54	4,267
14:2	Non-distinct fines	1.97	1.63	83	8.15	3,014
14:3	Other wastes, dental floss,	0.12	0.77	620	0.51	187
Category 14 - Other		4.87	5.42	112	20.20	7,468
Total		100.00			414.46	153,263

Table B-2. Waste Composition By Phase 2009-2010

		PHASE 1	PHASE 2	TOTAL
		Mean (%)	Mean (%)	Mean (%)
		(N=102)	(N=96)	(N=198)
Category 1 - Paper and Paperboard				
1:1	Newsprint (including flyers)	1.36	1.59	1.45
1:2	Magazines and mixed recyclable paper	2.79	2.39	2.57
1:3	Corrugated cardboard	1.09	1.01	1.04
1:4	Pizza boxes	0.22	0.13	0.18
1:5	Waxed corrugated cardboard	0.45	0.36	0.40
1:6	Boxboard	1.38	1.37	1.36
1:7	Telephone books	0.04	0.08	0.06
1:8	Books	0.11	0.29	0.19
1:9	Fine paper	0.39	0.46	0.42
1:10	Tissue paper, paper towels, napkins	5.55	5.22	5.34
1:11	Feminine Hygiene Products	0.22	0.47	0.34
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.46	0.41	0.43
1:13	Gabletop Cartons - Juice & Other	0.04	0.04	0.04
1:14	Aseptic boxes - Milk and Milk Substitutes	0.06	0.07	0.06
1:15	Aseptic boxes - Juice & Other	0.06	0.08	0.07
1:16	Brown kraft paper, including bags	0.48	0.42	0.45
1:17	Paper Cups	0.85	0.68	0.76
1:18	Other paper (non-recyclable)	1.42	1.41	1.40
Category 1 - Paper and Paperboard		16.95	16.46	16.55
Category 2 - Glass				
2:1	Beverage Containers - alcoholic	0.27	0.35	0.31
2:2	Beverage Containers - non alcoholic	0.10	0.13	0.11
2:3	Food Containers	0.49	0.57	0.52
2:4	Other Glass Containers	0.01	0.16	0.08
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	0.82	1.04	0.92
Category 2 - Glass		1.70	2.24	1.94
Category 3 - Ferrous Metals				
3:1	Beverage Containers - alcoholic	0.03	0.00	0.01
3:2	Beverage Containers - non alcoholic	0.01	0.00	0.01
3:3	Food Containers	0.49	0.51	0.50
3:4	Large metal appliances (white goods)	0.00	0.00	0.00
3:5	Other ferrous metals	1.40	2.39	1.86
Category 3 - Ferrous Metals		1.93	2.91	2.37
Category 4 - Non-ferrous Metals				
4:1	Beverage Containers - non alcoholic	0.06	0.06	0.06
4:2	Beverage Containers - alcoholic	0.04	0.05	0.05
4:3	Food Containers	0.05	0.04	0.04
4:4	Aluminum trays & foil	0.40	0.28	0.34
4:5	Other non-ferrous metals	0.17	0.12	0.15
Category 4 - Non-ferrous Metals		0.73	0.55	0.64

Table B-2. Waste Composition By Phase 2009-2010

		PHASE 1	PHASE 2	TOTAL
		Mean (%)	Mean (%)	Mean (%)
		(N=102)	(N=96)	(N=198)
Category 5 - Plastics				
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.15	0.16	0.15
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.20	0.25	0.22
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.03	0.04	0.04
5:4	Milk Jugs - HDPE	0.10	0.11	0.10
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.39	0.38	0.38
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.03	0.01	0.02
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.13	0.10	0.12
5:8	Other Rigid Containers - PET Food take out (#1)	0.06	0.01	0.03
5:9	Other Rigid Containers - PET Other food containers (#1)	0.20	0.32	0.25
5:10	Other Rigid Containers - #6 PS rigid take out	0.39	0.38	0.38
5:11	Other Rigid Containers - #6 PS foam take out	0.13	0.15	0.14
5:12	Other Rigid Containers - #6 PS foam packaging	0.70	0.67	0.68
5:13	Other Rigid Containers - #6 PS rigid packaging	0.25	0.05	0.15
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.07	0.18	0.12
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.22	0.39	0.30
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.18	0.24	0.21
5:17	Other Rigid Containers - All other rigid plastic packages	0.29	0.46	0.37
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.35	0.10	0.23
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.18	0.15	0.16
5:20	Film Packaging - commercial stretch wrap	0.18	0.16	0.17
5:21	Film Packaging - Laminates	2.51	4.49	3.42
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags - reused	0.81	0.44	0.63
5:23	Film Non Packaging - Polyethylene plastic bags and film	3.36	2.60	2.96
5:24	Durable Plastic Products - Non-packaging	1.79	1.92	1.83
5:25	Durable Plastic Products - Vinyl Siding	0.01	0.02	0.01
Category 5 - Plastics		12.73	13.75	13.09
Category 6 - Organic Waste				
6:1	Food waste - Backyard Compostable	6.43	9.83	7.98
6:2	Food Waste - Kitchen Waste	18.68	14.39	16.45
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.48	0.23
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.02	0.02	0.02
6:6	Yard Waste (<3" diameter)	3.56	3.20	3.35
6:7	Animal Faeces	1.95	0.98	1.47
6:8	Other organic waste	1.22	0.58	0.90
Category 6 - Organic Waste		31.85	29.49	30.41
Category 7 - Wood and Wood Products				
7:1	Pallets/skids	0.07	0.30	0.63
7:2	Wood shingles	3.49	4.89	4.12
7:3	Wood furniture (>80% wood)	0.40	0.79	0.58
7:4	Other wood - Clean	2.85	1.78	2.33
7:5	Other wood - Contaminated	2.20	2.40	2.27
Category 7 - Wood and Wood Products		9.01	10.16	9.93
Category 8 - Construction/Demolition Material				
8:1	Drywall	0.06	0.31	0.18
8:2	Asphalt shingles	1.93	1.19	2.05
8:3	Carpet & underlay	1.47	2.22	1.81
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.10	0.26	0.17
8:5	Rock/sand/dirt	0.94	0.13	0.55
8:6	Other C/D wastes	1.76	0.86	1.36
Category 8 - Construction/Demolition Material		6.26	4.97	6.12

Table B-2. Waste Composition By Phase 2009-2010

		PHASE 1	PHASE 2	TOTAL
		Mean (%)	Mean (%)	Mean (%)
		(N=102)	(N=96)	(N=198)
Category 9 - Textiles				
9:1	Clothing	2.18	2.06	2.10
9:2	Footwear	0.57	0.66	0.61
9:3	Other textiles	2.90	2.75	2.80
Category 9 - Textiles		5.65	5.47	5.51
Category 10 - Rubber				
10:1	Vehicle tires	0.01	0.06	0.04
10:2	Other rubber products	0.68	0.67	0.67
Category 10 - Rubber		0.69	0.74	0.71
Category 11 - Composite Products				
11:1	Disposable diapers	3.71	2.89	3.28
11:2	Furniture	0.55	0.68	0.61
11:3	Other composites, Q-tips.....	1.41	1.18	1.28
Category 11 - Composite Products		5.67	4.75	5.18
Category 12 - Hazardous Wastes				
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.00	0.00	0.00
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.11	0.05
12:3	Batteries - automotive (lead acid)	0.00	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.16	0.07	0.12
12:5	Batteries - Rechargeable	0.00	0.00	0.00
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.02	0.01	0.01
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.04	0.07	0.05
12:8	Oil Filter - Automotive (include number of units)	0.01	0.02	0.01
12:9	Paint - Latex, including containers, PCA	0.05	0.02	0.04
12:10	Paint - Empty latex paint containers (PCA)	0.01	0.02	0.01
12:11	Paint - Oil-based, including containers, (PCA)	0.07	0.03	0.05
12:12	Paint - Empty oil based paint containers, (PCA)	0.00	0.02	0.01
12:13	Paint - (non PCA) paint including container	0.01	0.00	0.01
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.00	0.03	0.01
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.03	0.01
12:21	Solvents including containers (non PCA)	0.01	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.03	0.04	0.03
12:28	Needles & Sharps	0.01	0.00	0.01
12:29	Other empty aerosol cans (not applicable to above categories)	0.15	0.13	0.14
12:30	Other hazardous waste (record description)	0.20	0.17	0.19
Category 12 - Hazardous Wastes		0.80	0.75	0.77

Table B-2. Waste Composition By Phase 2009-2010

		PHASE 1	PHASE 2	TOTAL
		Mean (%)	Mean (%)	Mean (%)
		(N=102)	(N=96)	(N=198)
Category 13 - Electronics				
13:1	Display Devices (monitors/TVs) less than 30"	0.08	0.95	0.49
13:2	Display Devices (monitors/TVs) more than 30"	0.01	0.00	0.01
13:3	Computers (desktops, laptops, desktop servers)	0.10	0.08	0.09
13:4	Desktop Computer printers, copiers, faxes,	0.14	0.15	0.14
13:5	Computer scanners	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)	0.01	0.02	0.02
13:7	Personal/Portable audio/video playback and/or recording devices	0.00	0.25	0.12
13:8	Vehicle audio/video devices	0.00	0.01	0.01
13:9	Home audio/video playback and/or recording systems	0.07	0.09	0.08
13:10	Non-cellular telephones and answering machines	0.00	0.02	0.01
13:11	Cell phones, PDAs and pagers	0.01	0.01	0.01
13:12	Other miscellaneous electronics - consumer	0.42	0.61	0.51
13:13	Other miscellaneous electronics - commercial	0.07	0.08	0.07
13:14	Small appliances	0.22	0.51	0.36
Category 13 - Electronics		1.14	2.78	1.91
Category 14 - Other				
14:1	Cat litter	2.45	3.21	2.78
14:2	Non-distinct fines	2.34	1.60	1.97
14:3	Other wastes, dental floss,	0.09	0.16	0.12
Category 14 - Other		4.87	4.98	4.87
Total		100	100	100

Table B-3. Waste Composition By Sector 2009-2010

		RES	ICI	DLC	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=98)	(N=83)	(N=17)	(N=198)
Category 1 - Paper and Paperboard					
1:1	Newsprint (including flyers)	1.38	1.83	0.00	1.45
1:2	Magazines and mixed recyclable paper	2.74	2.89	0.00	2.57
1:3	Corrugated cardboard	0.74	1.60	0.00	1.04
1:4	Pizza boxes	0.23	0.15	0.00	0.18
1:5	Waxed corrugated cardboard	0.06	0.88	0.00	0.40
1:6	Boxboard	1.53	1.45	0.00	1.36
1:7	Telephone books	0.08	0.04	0.00	0.06
1:8	Books	0.22	0.20	0.00	0.19
1:9	Fine paper	0.28	0.66	0.00	0.42
1:10	Tissue paper, paper towels, napkins	4.69	7.19	0.00	5.34
1:11	Feminine Hygiene Products	0.39	0.34	0.00	0.34
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.56	0.37	0.00	0.43
1:13	Gabletop Cartons - Juice & Other	0.05	0.03	0.00	0.04
1:14	Aseptic boxes - Milk and Milk Substitutes	0.09	0.04	0.00	0.06
1:15	Aseptic boxes - Juice & Other	0.08	0.07	0.00	0.07
1:16	Brown kraft paper, including bags	0.50	0.47	0.00	0.45
1:17	Paper Cups	0.43	1.30	0.00	0.76
1:18	Other paper (non-recyclable)	1.40	1.69	0.00	1.40
Category 1 - Paper and Paperboard		15.47	21.20	0.00	16.55
Category 2 - Glass					
2:1	Beverage Containers - alcoholic	0.35	0.32	0.00	0.31
2:2	Beverage Containers - non alcoholic	0.10	0.15	0.00	0.11
2:3	Food Containers	0.72	0.40	0.00	0.52
2:4	Other Glass Containers	0.11	0.06	0.00	0.08
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	1.10	0.89	0.00	0.92
Category 2 - Glass		2.37	1.83	0.00	1.94
Category 3 - Ferrous Metals					
3:1	Beverage Containers - alcoholic	0.00	0.03	0.00	0.01
3:2	Beverage Containers - non alcoholic	0.01	0.01	0.00	0.01
3:3	Food Containers	0.62	0.46	0.00	0.50
3:4	Large metal appliances (white goods)	0.00	0.00	0.00	0.00
3:5	Other ferrous metals	1.96	2.07	0.19	1.86
Category 3 - Ferrous Metals		2.59	2.57	0.19	2.37
Category 4 - Non-ferrous Metals					
4:1	Beverage Containers - non alcoholic	0.06	0.08	0.00	0.06
4:2	Beverage Containers - alcoholic	0.05	0.06	0.00	0.05
4:3	Food Containers	0.06	0.04	0.00	0.04
4:4	Aluminum trays & foil	0.49	0.23	0.00	0.34
4:5	Other non-ferrous metals	0.19	0.12	0.00	0.15
Category 4 - Non-ferrous Metals		0.85	0.53	0.00	0.64

Table B-3. Waste Composition By Sector 2009-2010

		RES	ICI	DLC	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=98)	(N=83)	(N=17)	(N=198)
Category 5 - Plastics					
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.13	0.21	0.00	0.15
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.30	0.17	0.00	0.22
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.03	0.05	0.00	0.04
5:4	Milk Jugs - HDPE	0.13	0.10	0.00	0.10
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.44	0.39	0.00	0.38
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.02	0.02	0.00	0.02
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.14	0.11	0.00	0.12
5:8	Other Rigid Containers - PET Food take out (#1)	0.04	0.03	0.00	0.03
5:9	Other Rigid Containers - PET Other food containers (#1)	0.29	0.26	0.00	0.25
5:10	Other Rigid Containers - #6 PS rigid take out	0.34	0.51	0.00	0.38
5:11	Other Rigid Containers - #6 PS foam take out	0.19	0.12	0.00	0.14
5:12	Other Rigid Containers - #6 PS foam packaging	0.78	0.70	0.00	0.68
5:13	Other Rigid Containers - #6 PS rigid packaging	0.16	0.18	0.00	0.15
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.16	0.09	0.00	0.12
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.32	0.34	0.00	0.30
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.09	0.38	0.00	0.21
5:17	Other Rigid Containers - All other rigid plastic packages	0.45	0.35	0.00	0.37
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.32	0.17	0.00	0.23
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.20	0.15	0.00	0.16
5:20	Film Packaging - commercial stretch wrap	0.05	0.33	0.04	0.17
5:21	Film Packaging - Laminates	3.96	3.50	0.00	3.42
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags - reused	0.92	0.41	0.00	0.63
5:23	Film Non Packaging - Polyethylene plastic bags and film	2.84	3.72	0.00	2.96
5:24	Durable Plastic Products - Non-packaging	1.63	2.44	0.04	1.83
5:25	Durable Plastic Products - Vinyl Siding	0.01	0.02	0.00	0.01
Category 5 - Plastics		13.95	14.73	0.08	13.09
Category 6 - Organic Waste					
6:1	Food waste - Backyard Compostable	9.54	7.77	0.00	7.98
6:2	Food Waste - Kitchen Waste	18.90	16.93	0.00	16.45
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.54	0.00	0.23
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.04	0.00	0.00	0.02
6:6	Yard Waste (<3" diameter)	3.50	3.87	0.00	3.35
6:7	Animal Faeces	1.57	1.66	0.00	1.47
6:8	Other organic waste	1.01	0.96	0.00	0.90
Category 6 - Organic Waste		34.56	31.74	0.00	30.41
Category 7 - Wood and Wood Products					
7:1	Pallets/skids	0.00	0.35	5.63	0.63
7:2	Wood shingles	0.00	0.00	47.99	4.12
7:3	Wood furniture (>80% wood)	0.74	0.51	0.00	0.58
7:4	Other wood - Clean	1.44	1.96	9.25	2.33
7:5	Other wood - Contaminated	1.71	3.30	0.51	2.27
Category 7 - Wood and Wood Products		3.90	6.12	63.38	9.93
Category 8 - Construction/Demolition Material					
8:1	Drywall	0.17	0.23	0.00	0.18
8:2	Asphalt shingles	0.41	0.14	20.77	2.05
8:3	Carpet & underlay	1.48	1.36	5.88	1.81
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.16	0.22	0.00	0.17
8:5	Rock/sand/dirt	0.06	0.10	5.56	0.55
8:6	Other C/D wastes	1.14	1.14	3.71	1.36
Category 8 - Construction/Demolition Material		3.43	3.20	35.93	6.12

Table B-3. Waste Composition By Sector 2009-2010

		RES	ICI	DLC	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=98)	(N=83)	(N=17)	(N=198)
Category 9 - Textiles					
9:1	Clothing	2.83	1.67	0.00	2.10
9:2	Footwear	0.81	0.49	0.00	0.61
9:3	Other textiles	2.86	3.30	0.00	2.80
Category 9 - Textiles		6.50	5.46	0.00	5.51
Category 10 - Rubber					
10:1	Vehicle tires	0.00	0.08	0.00	0.04
10:2	Other rubber products	0.42	1.10	0.00	0.67
Category 10 - Rubber		0.42	1.19	0.00	0.71
Category 11 - Composite Products					
11:1	Disposable diapers	4.89	2.06	0.00	3.28
11:2	Furniture	0.42	0.86	0.43	0.61
11:3	Other composites, Q-tips.....	1.39	1.43	0.00	1.28
Category 11 - Composite Products		6.69	4.35	0.43	5.18
Category 12 - Hazardous Wastes					
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.00	0.00	0.00	0.00
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.12	0.00	0.05
12:3	Batteries - automotive (lead acid)	0.00	0.00	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.17	0.07	0.00	0.12
12:5	Batteries - Rechargeable	0.01	0.00	0.00	0.00
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.03	0.00	0.00	0.01
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.02	0.10	0.00	0.05
12:8	Oil Filter - Automotive (include number of units)	0.00	0.04	0.00	0.01
12:9	Paint - Latex, including containers, PCA	0.03	0.05	0.00	0.04
12:10	Paint - Empty latex paint containers (PCA)	0.02	0.01	0.00	0.01
12:11	Paint - Oil-based, including containers, (PCA)	0.10	0.01	0.00	0.05
12:12	Paint - Empty oil based paint containers, (PCA)	0.01	0.01	0.00	0.01
12:13	Paint - (non PCA) paint including container	0.01	0.00	0.00	0.01
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.01	0.02	0.00	0.01
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.03	0.00	0.01
12:21	Solvents including containers (non PCA)	0.00	0.01	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.05	0.02	0.00	0.03
12:28	Needles & Sharps	0.01	0.00	0.00	0.01
12:29	Other empty aerosol cans (not applicable to above categories)	0.21	0.08	0.00	0.14
12:30	Other hazardous waste (record description)	0.17	0.24	0.00	0.19
Category 12 - Hazardous Wastes		0.85	0.83	0.00	0.77

Table B-3. Waste Composition By Sector 2009-2010

		RES	ICI	DLC	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=98)	(N=83)	(N=17)	(N=198)
Category 13 - Electronics					
13:1	Display Devices (monitors/TVs) less than 30"	0.49	0.59	0.00	0.49
13:2	Display Devices (monitors/TVs) more than 30"	0.01	0.00	0.00	0.01
13:3	Computers (desktops, laptops, desktop servers)	0.06	0.15	0.00	0.09
13:4	Desktop Computer printers, copiers, faxes,	0.02	0.32	0.00	0.14
13:5	Computer scanners	0.00	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)	0.02	0.01	0.00	0.02
13:7	Personal/Portable audio/video playback and/or recording devices	0.20	0.05	0.00	0.12
13:8	Vehicle audio/video devices	0.00	0.02	0.00	0.01
13:9	Home audio/video playback and/or recording systems	0.05	0.12	0.00	0.08
13:10	Non-cellular telephones and answering machines	0.02	0.01	0.00	0.01
13:11	Cell phones, PDAs and pagers	0.01	0.00	0.00	0.01
13:12	Other miscellaneous electronics - consumer	0.42	0.72	0.00	0.51
13:13	Other miscellaneous electronics - commercial	0.07	0.09	0.00	0.07
13:14	Small appliances	0.38	0.40	0.00	0.36
Category 13 - Electronics		1.76	2.48	0.00	1.91
Category 14 - Other					
14:1	Cat litter	4.18	1.71	0.00	2.78
14:2	Non-distinct fines	2.35	1.92	0.00	1.97
14:3	Other wastes, dental floss,	0.12	0.15	0.00	0.12
Category 14 - Other		6.65	3.77	0.00	4.87
Total		100	100	100	100

APPENDIX C
Detailed Result Tables
Apartment and Condominium Study
Neighbourhood Study

Table C-1. Waste Composition Apartments By Area 2009-2010.

		VICTORIA	SAANICH	ESQUIMALT	OAK BAY	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=17)	(N=2)	(N=3)	(N=2)	(N=24)
Category 1 - Paper and Paperboard						
1:1	Newsprint (including flyers)	2.58	0.56	0.81	1.16	2.07
1:2	Magazines and mixed recyclable paper	3.55	1.44	1.89	2.02	3.04
1:3	Corrugated cardboard	0.98	0.45	0.45	0.48	0.83
1:4	Pizza boxes	0.19	0.40	0.21	0.50	0.24
1:5	Waxed corrugated cardboard	0.00	0.00	0.00	0.00	0.00
1:6	Boxboard	1.97	0.89	1.80	3.50	1.99
1:7	Telephone books	0.18	0.00	0.00	0.00	0.13
1:8	Books	0.26	0.00	0.00	0.00	0.18
1:9	Fine paper	0.23	0.15	0.20	0.06	0.21
1:10	Tissue paper, paper towels, napkins	4.74	7.90	5.47	4.45	5.07
1:11	Feminine Hygiene Products	0.27	0.19	1.28	1.96	0.53
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.47	0.62	0.32	0.44	0.46
1:13	Gabletop Cartons - Juice & Other	0.02	0.01	0.02	0.00	0.02
1:14	Aseptic boxes - Milk and Milk Substitutes	0.09	0.13	0.04	0.09	0.09
1:15	Aseptic boxes - Juice & Other	0.10	0.13	0.09	0.00	0.09
1:16	Brown kraft paper, including bags	0.50	0.53	0.43	0.39	0.48
1:17	Paper Cups	0.32	0.20	0.32	0.34	0.31
1:18	Other paper (non-recyclable)	0.95	0.93	0.81	1.10	0.94
Category 1 - Paper and Paperboard		17.40	14.54	14.15	16.50	16.68
Category 2 - Glass						
2:1	Beverage Containers - alcoholic	0.30	0.00	0.08	0.99	0.30
2:2	Beverage Containers - non alcoholic	0.12	0.00	0.00	0.14	0.10
2:3	Food Containers	0.97	0.50	0.53	1.87	0.95
2:4	Other Glass Containers	0.03	0.13	0.00	0.22	0.05
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	1.65	0.69	1.94	0.33	1.50
Category 2 - Glass		3.08	1.32	2.55	3.54	2.91
Category 3 - Ferrous Metals						
3:1	Beverage Containers - alcoholic	0.00	0.00	0.00	0.00	0.00
3:2	Beverage Containers - non alcoholic	0.04	0.04	0.00	0.00	0.03
3:3	Food Containers	0.73	1.01	0.71	0.51	0.73
3:4	Large metal appliances (white goods)	0.00	0.00	0.00	0.00	0.00
3:5	Other ferrous metals	1.15	0.39	9.53	1.67	2.18
Category 3 - Ferrous Metals		1.92	1.45	10.24	2.18	2.94
Category 4 - Non-ferrous Metals						
4:1	Beverage Containers - non alcoholic	0.03	0.03	0.03	0.10	0.04
4:2	Beverage Containers - alcoholic	0.07	0.02	0.00	0.04	0.05
4:3	Food Containers	0.04	0.03	0.12	0.05	0.05
4:4	Aluminum trays & foil	0.52	0.51	0.41	0.40	0.49
4:5	Other non-ferrous metals	0.31	0.00	0.00	0.00	0.22
Category 4 - Non-ferrous Metals		0.97	0.59	0.56	0.58	0.86

Table C-1. Waste Composition Apartments By Area 2009-2010.

		VICTORIA	SAANICH	ESQUIMALT	OAK BAY	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=17)	(N=2)	(N=3)	(N=2)	(N=24)
Category 5 - Plastics						
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.10	0.19	0.10	0.21	0.12
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.34	1.55	0.32	0.36	0.44
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.03	0.04	0.06	0.00	0.03
5:4	Milk Jugs - HDPE	0.21	0.13	0.10	0.41	0.21
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.56	0.51	0.29	0.84	0.54
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.01	0.03	0.04	0.03	0.02
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.10	0.51	0.18	0.11	0.14
5:8	Other Rigid Containers - PET Food take out (#1)	0.03	0.18	0.03	0.00	0.04
5:9	Other Rigid Containers - PET Other food containers (#1)	0.34	0.43	0.23	0.21	0.32
5:10	Other Rigid Containers - #6 PS rigid take out	0.42	0.46	0.26	0.16	0.38
5:11	Other Rigid Containers - #6 PS foam take out	0.11	0.15	0.15	0.14	0.12
5:12	Other Rigid Containers - #6 PS foam packaging	0.73	0.94	0.81	0.73	0.76
5:13	Other Rigid Containers - #6 PS rigid packaging	0.22	0.24	0.13	0.35	0.22
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.10	0.09	0.16	0.05	0.10
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.32	0.96	0.40	0.46	0.39
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.02	0.00	0.00	1.64	0.15
5:17	Other Rigid Containers - All other rigid plastic packages	0.50	0.40	0.41	0.56	0.49
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.34	0.19	0.23	0.23	0.30
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.22	0.13	0.09	0.17	0.19
5:20	Film Packaging - commercial stretch wrap	0.01	0.00	0.03	0.00	0.01
5:21	Film Packaging - Laminates	3.07	3.22	2.58	3.12	3.02
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags - reused	1.42	1.22	0.65	1.26	1.29
5:23	Film Non Packaging - Polyethylene plastic bags and film	2.95	2.30	2.05	1.65	2.67
5:24	Durable Plastic Products - Non-packaging	1.16	1.04	0.46	1.05	1.05
5:25	Durable Plastic Products - Vinyl Siding	0.00	0.00	0.00	0.00	0.00
Category 5 - Plastics		13.31	14.91	9.77	13.73	13.03
Category 6 - Organic Waste						
6:1	Food waste - Backyard Compostable	13.14	15.03	12.24	12.93	13.16
6:2	Food Waste - Kitchen Waste	20.32	21.41	14.82	16.63	19.42
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.00	0.00	0.00	0.00
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.07	0.00	0.00	0.00	0.05
6:6	Yard Waste (<3" diameter)	2.35	12.74	1.53	0.92	2.99
6:7	Animal Faeces	0.34	0.78	0.00	3.88	0.63
6:8	Other organic waste	0.76	0.30	0.27	0.81	0.66
Category 6 - Organic Waste		36.98	50.25	28.85	35.18	36.92
Category 7 - Wood and Wood Products						
7:1	Pallets/skids	0.00	0.00	0.00	0.00	0.00
7:2	Wood shingles	0.00	0.00	0.00	0.00	0.00
7:3	Wood furniture (>80% wood)	0.28	0.00	0.00	0.00	0.20
7:4	Other wood - Clean	0.35	0.00	0.10	0.00	0.26
7:5	Other wood - Contaminated	2.38	0.99	0.00	0.00	1.76
Category 7 - Wood and Wood Products		3.00	0.99	0.10	0.00	2.22
Category 8 - Construction/Demolition Material						
8:1	Drywall	0.00	0.00	0.00	0.00	0.00
8:2	Asphalt shingles	0.00	0.00	0.00	0.00	0.00
8:3	Carpet & underlay	0.71	0.92	1.14	0.26	0.74
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.25	0.00	0.00	0.00	0.18
8:5	Rock/sand/dirt	0.00	0.00	0.00	0.00	0.00
8:6	Other C/D wastes	0.13	0.00	0.00	5.89	0.58
Category 8 - Construction/Demolition Material		1.09	0.92	1.14	6.14	1.50

Table C-1. Waste Composition Apartments By Area 2009-2010.

		VICTORIA	SAANICH	ESQUIMALT	OAK BAY	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=17)	(N=2)	(N=3)	(N=2)	(N=24)
Category 9 - Textiles						
9:1	Clothing	3.54	1.70	1.89	0.92	2.97
9:2	Footwear	0.83	1.94	0.02	0.40	0.79
9:3	Other textiles	2.57	1.77	2.60	0.77	2.35
Category 9 - Textiles		6.94	5.40	4.52	2.09	6.11
Category 10 - Rubber						
10:1	Vehicle tires	0.00	0.00	0.00	0.00	0.00
10:2	Other rubber products	0.10	0.08	0.08	0.20	0.11
Category 10 - Rubber		0.10	0.08	0.08	0.20	0.11
Category 11 - Composite Products						
11:1	Disposable diapers	3.04	1.08	0.00	4.43	2.61
11:2	Furniture	0.05	0.00	4.13	0.00	0.55
11:3	Other composites, Q-tips.....	1.42	1.07	0.96	0.67	1.27
Category 11 - Composite Products		4.51	2.14	5.09	5.10	4.43
Category 12 - Hazardous Wastes						
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.02	0.00	0.00	0.00	0.01
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.00	0.00	0.00	0.00
12:3	Batteries - automotive (lead acid)	0.00	0.03	0.00	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.12	0.03	0.03	0.05	0.10
12:5	Batteries - Rechargeable	0.00	0.00	0.00	0.00	0.00
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.13	0.00	0.00	0.00	0.09
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.00	0.00	0.00	0.00	0.00
12:8	Oil Filter - Automotive (include number of units)	0.00	0.00	0.00	0.00	0.00
12:9	Paint - Latex, including containers, PCA	0.07	0.00	0.00	0.19	0.06
12:10	Paint - Empty latex paint containers (PCA)	0.00	0.00	0.00	0.00	0.00
12:11	Paint - Oil-based, including containers, (PCA)	0.05	0.00	0.00	0.00	0.03
12:12	Paint - Empty oil based paint containers, (PCA)	0.00	0.00	0.18	0.00	0.02
12:13	Paint - (non PCA) paint including container	0.00	0.00	0.00	0.00	0.00
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.00	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.00	0.00	0.08	0.00	0.01
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.00	0.00	0.00	0.00
12:21	Solvents including containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.02	0.03	0.00	0.00	0.02
12:28	Needles & Sharps	0.03	0.00	0.00	0.00	0.02
12:29	Other empty aerosol cans (not applicable to above categories)	0.25	0.00	0.10	0.40	0.22
12:30	Other hazardous waste (record description)	0.08	0.00	0.00	0.19	0.07
Category 12 - Hazardous Wastes		0.78	0.09	0.39	0.83	0.68

Table C-1. Waste Composition Apartments By Area 2009-2010.

		VICTORIA	SAANICH	ESQUIMALT	OAK BAY	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=17)	(N=2)	(N=3)	(N=2)	(N=24)
Category 13 - Electronics						
13:1	Display Devices (monitors/TVs) less than 30"	2.78	0.00	0.00	0.00	1.97
13:2	Display Devices (monitors/TVs) more than 30"	0.00	0.00	0.00	0.00	0.00
13:3	Computers (desktops, laptops, desktop servers)	0.03	0.00	0.00	0.00	0.02
13:4	Desktop Computer printers, copiers, faxes,	0.00	0.00	0.00	0.00	0.00
13:5	Computer scanners	0.00	0.00	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)	0.04	0.00	0.00	0.00	0.03
13:7	Personal/Portable audio/video playback and/or recording devices	0.00	0.00	1.64	0.00	0.20
13:8	Vehicle audio/video devices	0.00	0.00	0.00	0.00	0.00
13:9	Home audio/video playback and/or recording systems	0.00	0.00	0.00	0.00	0.00
13:10	Non-cellular telephones and answering machines	0.00	0.00	0.00	0.00	0.00
13:11	Cell phones, PDAs and pagers	0.00	0.00	0.00	0.00	0.00
13:12	Other miscellaneous electronics - consumer	0.99	0.00	0.12	2.06	0.89
13:13	Other miscellaneous electronics - commercial	0.00	0.00	0.00	0.00	0.00
13:14	Small appliances	0.05	0.44	5.12	0.00	0.71
Category 13 - Electronics		3.89	0.44	6.88	2.06	3.82
Category 14 - Other						
14:1	Cat litter	2.71	2.96	12.76	8.39	4.46
14:2	Non-distinct fines	3.32	3.95	2.92	3.48	3.34
14:3	Other wastes, dental floss,	0.00	0.00	0.00	0.00	0.00
Category 14 - Other		6.03	6.90	15.69	11.86	7.80
Total		100	100	100	100	100

Table C-2. Waste Composition Neighbourhood Study By Area (Single family Residential)

		VICTORIA	SAANICH	OAK BAY	VIEW ROYAL	ESQUIMALT	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=4)	(N=4)	(N=3)	(N=1)	(N=2)	(N=14)
Category 1 - Paper and Paperboard							
1:1	Newsprint (including flyers)	0.41	0.56	1.49	0.23	1.66	0.85
1:2	Magazines and mixed recyclable paper	1.73	1.96	1.94	1.25	1.78	1.81
1:3	Corrugated cardboard	0.35	0.95	0.71	0.47	0.73	0.66
1:4	Pizza boxes	0.14	0.08	0.11	0.27	0.92	0.23
1:5	Waxed corrugated cardboard	0.00	0.08	0.08	0.00	0.00	0.04
1:6	Boxboard	1.13	1.75	0.79	0.94	1.78	1.31
1:7	Telephone books	0.00	0.00	0.00	0.00	0.00	0.00
1:8	Books	0.27	0.00	0.00	0.00	0.00	0.08
1:9	Fine paper	0.11	0.10	0.16	0.09	0.11	0.12
1:10	Tissue paper, paper towels, napkins	4.04	4.43	6.11	4.81	4.29	4.68
1:11	Feminine Hygiene Products	0.22	0.93	0.83	0.09	1.97	0.80
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.64	0.51	0.69	0.64	1.00	0.66
1:13	Gabletop Cartons - Juice & Other	0.04	0.01	0.03	0.06	0.03	0.03
1:14	Aseptic boxes - Milk and Milk Substitutes	0.13	0.17	0.07	0.03	0.09	0.12
1:15	Aseptic boxes - Juice & Other	0.08	0.11	0.09	0.06	0.07	0.09
1:16	Brown kraft paper, including bags	0.45	0.50	0.89	0.53	0.34	0.55
1:17	Paper Cups	0.48	0.33	0.25	0.45	0.26	0.35
1:18	Other paper (non-recyclable)	2.85	1.26	1.22	1.46	1.20	1.71
Category 1 - Paper and Paperboard		13.06	13.72	15.47	11.40	16.23	14.10
Category 2 - Glass							
2:1	Beverage Containers - alcoholic	0.15	0.22	0.62	0.00	0.20	0.27
2:2	Beverage Containers - non alcoholic	0.11	0.00	0.12	0.00	0.00	0.06
2:3	Food Containers	0.82	0.47	0.55	0.03	1.35	0.68
2:4	Other Glass Containers	0.13	0.07	0.12	0.00	0.76	0.19
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	1.74	0.98	0.86	0.52	0.77	1.11
Category 2 - Glass		2.95	1.74	2.27	0.55	3.08	2.31
Category 3 - Ferrous Metals							
3:1	Beverage Containers - alcoholic	0.00	0.00	0.00	0.00	0.00	0.00
3:2	Beverage Containers - non alcoholic	0.00	0.00	0.00	0.00	0.00	0.00
3:3	Food Containers	0.40	0.40	0.46	0.41	0.63	0.45
3:4	Large metal appliances (white goods)	0.00	0.00	0.00	0.00	0.00	0.00
3:5	Other ferrous metals	0.51	1.03	0.20	1.58	0.95	0.73
Category 3 - Ferrous Metals		0.91	1.43	0.66	1.99	1.58	1.18
Category 4 - Non-ferrous Metals							
4:1	Beverage Containers - non alcoholic	0.06	0.01	0.12	0.00	0.04	0.05
4:2	Beverage Containers - alcoholic	0.01	0.04	0.14	0.00	0.01	0.05
4:3	Food Containers	0.06	0.03	0.05	0.06	0.08	0.05
4:4	Aluminum trays & foil	0.49	0.45	0.72	0.41	0.36	0.50
4:5	Other non-ferrous metals	0.08	0.55	0.13	0.08	0.00	0.21
Category 4 - Non-ferrous Metals		0.71	1.07	1.16	0.55	0.49	0.87

Table C-2. Waste Composition Neighbourhood Study By Area (Single family Residential)

		VICTORIA	SAANICH	OAK BAY	VIEW ROYAL	ESQUIMALT	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=4)	(N=4)	(N=3)	(N=1)	(N=2)	(N=14)
Category 5 - Plastics							
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.08	0.07	0.08	0.05	0.16	0.08
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.34	0.21	0.29	0.17	0.31	0.28
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.03	0.00	0.02	0.00	0.01	0.01
5:4	Milk Jugs - HDPE	0.03	0.06	0.08	0.05	0.49	0.12
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.32	0.31	0.28	0.41	0.34	0.31
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.01	0.00	0.01	0.00	0.00	0.00
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.13	0.15	0.02	0.00	0.16	0.11
5:8	Other Rigid Containers - PET Food take out (#1)	0.00	0.03	0.02	0.00	0.06	0.02
5:9	Other Rigid Containers - PET Other food containers (#1)	0.32	0.24	0.14	0.30	0.47	0.28
5:10	Other Rigid Containers - #6 PS rigid take out	0.41	0.33	0.29	0.30	0.25	0.33
5:11	Other Rigid Containers - #6 PS foam take out	0.04	0.12	0.09	0.02	0.03	0.07
5:12	Other Rigid Containers - #6 PS foam packaging	0.75	0.71	0.96	1.41	0.64	0.82
5:13	Other Rigid Containers - #6 PS rigid packaging	0.18	0.11	0.28	0.36	0.21	0.20
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.07	0.14	0.24	0.03	0.02	0.12
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.35	0.37	0.22	0.17	0.46	0.33
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.08	0.00	0.13	0.00	0.00	0.05
5:17	Other Rigid Containers - All other rigid plastic packages	0.40	0.39	0.39	0.33	0.43	0.39
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.18	0.21	0.53	0.41	0.23	0.29
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.14	0.18	0.28	0.25	0.59	0.25
5:20	Film Packaging - commercial stretch wrap	0.00	0.00	0.00	0.00	0.03	0.00
5:21	Film Packaging - Laminates	3.35	4.13	6.14	3.44	2.99	4.12
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags - reused	0.63	0.48	3.58	1.57	0.82	1.31
5:23	Film Non Packaging - Polyethylene plastic bags and film	2.68	3.10	3.31	3.05	3.11	3.02
5:24	Durable Plastic Products - Non-packaging	1.20	0.76	0.71	4.38	1.11	1.18
5:25	Durable Plastic Products - Vinyl Siding	0.00	0.00	0.00	0.00	0.00	0.00
Category 5 - Plastics		11.75	12.06	18.06	16.70	12.91	13.71
Category 6 - Organic Waste							
6:1	Food waste - Backyard Compostable	12.51	11.71	5.24	5.32	8.92	9.69
6:2	Food Waste - Kitchen Waste	17.12	23.67	20.71	13.38	22.51	20.26
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.00	0.00	0.00	0.00	0.00
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.00	0.21	0.00	0.00	0.00	0.06
6:6	Yard Waste (<3" diameter)	8.16	2.62	4.82	0.00	1.99	4.40
6:7	Animal Faeces	1.59	2.23	1.34	14.03	5.86	3.22
6:8	Other organic waste	5.42	0.81	0.84	0.41	0.78	2.10
Category 6 - Organic Waste		44.79	41.24	32.94	33.14	40.06	39.73
Category 7 - Wood and Wood Products							
7:1	Pallets/skids	0.00	0.00	0.00	0.00	0.00	0.00
7:2	Wood shingles	0.00	0.00	0.00	0.00	0.00	0.00
7:3	Wood furniture (>80% wood)	0.00	0.00	0.00	0.00	0.00	0.00
7:4	Other wood - Clean	0.00	1.36	0.00	0.00	0.00	0.39
7:5	Other wood - Contaminated	0.88	0.52	1.09	0.00	1.61	0.86
Category 7 - Wood and Wood Products		0.88	1.88	1.09	0.00	1.61	1.25
Category 8 - Construction/Demolition Material							
8:1	Drywall	0.00	0.00	0.00	0.00	0.15	0.02
8:2	Asphalt shingles	0.00	0.00	0.00	0.00	0.00	0.00
8:3	Carpet & underlay	0.81	4.05	0.46	0.00	1.26	1.67
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.00	0.03	0.00	0.00	0.00	0.01
8:5	Rock/sand/dirt	0.00	0.00	0.00	0.00	0.00	0.00
8:6	Other C/D wastes	0.03	0.81	1.76	0.00	1.36	0.81
Category 8 - Construction/Demolition Material		0.84	4.89	2.22	0.00	2.77	2.51

Table C-2. Waste Composition Neighbourhood Study By Area (Single family Residential)

		VICTORIA	SAANICH	OAK BAY	VIEW ROYAL	ESQUIMALT	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=4)	(N=4)	(N=3)	(N=1)	(N=2)	(N=14)
Category 9 - Textiles							
9:1	Clothing	2.18	2.97	2.04	0.63	1.10	2.11
9:2	Footwear	0.77	0.65	0.54	0.00	0.25	0.56
9:3	Other textiles	1.73	1.92	1.97	0.47	1.47	1.71
Category 9 - Textiles		4.68	5.54	4.54	1.10	2.82	4.38
Category 10 - Rubber							
10:1	Vehicle tires	0.00	0.00	0.00	0.00	0.00	0.00
10:2	Other rubber products	0.02	0.55	0.08	0.05	0.04	0.19
Category 10 - Rubber		0.02	0.55	0.08	0.05	0.04	0.19
Category 11 - Composite Products							
11:1	Disposable diapers	7.83	5.21	9.50	15.26	7.66	7.95
11:2	Furniture	0.00	1.29	0.00	0.00	0.00	0.37
11:3	Other composites, Q-tips.....	0.58	0.82	1.39	4.32	1.23	1.18
Category 11 - Composite Products		8.41	7.32	10.89	19.58	8.89	9.50
Category 12 - Hazardous Wastes							
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.00	0.00	0.00	0.00	0.00	0.00
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.00	0.00	0.00	0.00	0.00
12:3	Batteries - automotive (lead acid)	0.00	0.00	0.00	0.00	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.09	0.13	0.14	0.06	0.11	0.11
12:5	Batteries - Rechargeable	0.00	0.00	0.00	0.00	0.00	0.00
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.00	0.00	0.00	0.00	0.00	0.00
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.00	0.00	0.00	0.00	0.00	0.00
12:8	Oil Filter - Automotive (include number of units)	0.00	0.00	0.00	0.00	0.00	0.00
12:9	Paint - Latex, including containers, PCA	0.17	0.00	0.00	0.00	0.00	0.05
12:10	Paint - Empty latex paint containers (PCA)	0.01	0.00	0.00	0.00	0.00	0.00
12:11	Paint - Oil-based, including containers, (PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:12	Paint - Empty oil based paint containers, (PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:13	Paint - (non PCA) paint including container	0.00	0.00	0.00	0.00	0.00	0.00
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.02	0.00	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:21	Solvents including containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.00	0.00	0.03	0.00	0.00	0.01
12:28	Needles & Sharps	0.00	0.00	0.00	0.00	0.00	0.00
12:29	Other empty aerosol cans (not applicable to above categories)	0.08	0.21	0.14	0.16	0.29	0.16
12:30	Other hazardous waste (record description)	0.00	0.05	0.00	0.00	0.00	0.01
Category 12 - Hazardous Wastes		0.34	0.40	0.30	0.22	0.40	0.35

Table C-2. Waste Composition Neighbourhood Study By Area (Single family Residential)

		VICTORIA	SAANICH	OAK BAY	VIEW ROYAL	ESQUIMALT	TOTAL
		Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=4)	(N=4)	(N=3)	(N=1)	(N=2)	(N=14)
Category 13 - Electronics							
13:1	Display Devices (monitors/TVs) less than 30"	0.00	0.00	0.00	0.00	0.00	0.00
13:2	Display Devices (monitors/TVs) more than 30"	0.00	0.25	0.00	0.00	0.00	0.07
13:3	Computers (desktops, laptops, desktop servers)	0.00	0.00	0.00	0.00	0.00	0.00
13:4	Desktop Computer printers, copiers, faxes,	0.00	0.00	0.00	0.00	0.00	0.00
13:5	Computer scanners	0.00	0.00	0.00	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)	0.00	0.00	0.00	0.00	0.00	0.00
13:7	Personal/Portable audio/video playback and/or recording devices	0.00	0.00	0.00	0.00	0.00	0.00
13:8	Vehicle audio/video devices	0.00	0.00	0.00	0.00	0.00	0.00
13:9	Home audio/video playback and/or recording systems	0.00	0.00	0.00	1.64	0.00	0.12
13:10	Non-cellular telephones and answering machines	0.00	0.06	0.00	0.00	0.00	0.02
13:11	Cell phones, PDAs and pagers	0.00	0.00	0.00	0.00	0.05	0.01
13:12	Other miscellaneous electronics - consumer	0.38	0.21	0.43	0.38	0.00	0.29
13:13	Other miscellaneous electronics - commercial	0.00	0.00	0.00	0.00	0.00	0.00
13:14	Small appliances	0.00	0.00	0.00	0.00	0.00	0.00
Category 13 - Electronics		0.38	0.52	0.43	2.02	0.05	0.50
Category 14 - Other							
14:1	Cat litter	8.66	3.15	7.10	9.49	7.52	6.65
14:2	Non-distinct fines	1.62	4.48	2.78	3.22	1.54	2.79
14:3	Other wastes, dental floss,	0.00	0.00	0.00	0.00	0.00	0.00
Category 14 - Other		10.28	7.63	9.89	12.71	9.06	9.44
Total		100	100	100	100	100	100

Table C-3. Waste Composition Electoral Areas

		Mayne Island	Pender Island	Port Renfrew	Salt Spring Island	Total
		(%)	(%)	(%)	(%)	(%)
		(N=2)	(N=1)	(N=1)	(N=4)	(N=8)
Category 1 - Paper and Paperboard						
1:1	Newsprint (including flyers)	1.28	4.35	0.23	0.34	1.06
1:2	Magazines and mixed recyclable paper	0.87	3.20	0.74	4.84	3.13
1:3	Corrugated cardboard	0.15	1.27	1.54	0.41	0.59
1:4	Pizza boxes	0.00	0.00	0.00	0.00	0.00
1:5	Waxed corrugated cardboard	0.00	0.00	0.00	0.00	0.00
1:6	Boxboard	1.00	2.12	1.03	1.41	1.35
1:7	Telephone books	0.00	0.00	0.00	0.00	0.00
1:8	Books	0.00	0.33	0.00	0.52	0.30
1:9	Fine paper	0.02	0.56	0.00	0.30	0.22
1:10	Tissue paper, paper towels, napkins	5.02	8.67	2.24	4.29	4.76
1:11	Feminine Hygiene Products	0.08	0.62	0.02	0.11	0.15
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.14	0.37	0.21	0.18	0.20
1:13	Gabletop Cartons - Juice & Other	0.03	0.00	0.05	0.00	0.02
1:14	Aseptic boxes - Milk and Milk Substitutes	0.16	0.05	0.05	0.07	0.09
1:15	Aseptic boxes - Juice & Other	0.06	0.05	0.00	0.04	0.04
1:16	Brown kraft paper, including bags	0.25	0.17	0.33	0.48	0.36
1:17	Paper Cups	0.16	0.11	0.10	0.17	0.15
1:18	Other paper (non-recyclable)	0.86	4.07	0.98	1.29	1.49
Category 1 - Paper and Paperboard		10.07	25.93	7.52	14.44	13.92
Category 2 - Glass						
2:1	Beverage Containers - alcoholic	0.66	0.00	0.00	0.33	0.33
2:2	Beverage Containers - non alcoholic	0.08	0.37	0.00	0.32	0.23
2:3	Food Containers	0.99	1.16	0.70	0.76	0.86
2:4	Other Glass Containers	0.00	0.80	0.24	0.21	0.23
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	0.35	0.98	0.53	1.36	0.96
Category 2 - Glass		2.08	3.31	1.46	2.98	2.61
Category 3 - Ferrous Metals						
3:1	Beverage Containers - alcoholic	0.00	0.00	0.00	0.00	0.00
3:2	Beverage Containers - non alcoholic	0.00	0.04	0.00	0.00	0.01
3:3	Food Containers	0.37	1.58	0.98	0.44	0.63
3:4	Large metal appliances (white goods)	0.00	0.00	0.00	0.00	0.00
3:5	Other ferrous metals	0.50	0.07	0.67	1.50	0.97
Category 3 - Ferrous Metals		0.87	1.70	1.65	1.94	1.61
Category 4 - Non-ferrous Metals						
4:1	Beverage Containers - non alcoholic	0.18	0.05	0.02	0.02	0.06
4:2	Beverage Containers - alcoholic	0.26	0.00	0.00	0.01	0.07
4:3	Food Containers	0.05	0.17	0.02	0.05	0.06
4:4	Aluminum trays & foil	0.74	0.19	0.30	0.83	0.66
4:5	Other non-ferrous metals	0.31	0.04	0.00	0.35	0.26
Category 4 - Non-ferrous Metals		1.54	0.45	0.34	1.26	1.12

Table C-3. Waste Composition Electoral Areas

		Mayne Island	Pender Island	Port Renfrew	Salt Spring Island	Total
		(%)	(%)	(%)	(%)	(%)
		(N=2)	(N=1)	(N=1)	(N=4)	(N=8)
Category 5 - Plastics						
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.06	0.07	0.00	0.31	0.18
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.34	0.44	0.10	0.26	0.28
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.04	0.00	0.00	0.04	0.03
5:4	Milk Jugs - HDPE	0.04	0.19	0.00	0.04	0.05
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.23	0.40	0.13	0.64	0.44
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.00	0.01	0.00	0.00	0.00
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.01	0.07	0.07	0.05	0.05
5:8	Other Rigid Containers - PET Food take out (#1)	0.00	0.02	0.00	0.00	0.00
5:9	Other Rigid Containers - PET Other food containers (#1)	0.31	0.32	0.10	0.31	0.29
5:10	Other Rigid Containers - #6 PS rigid take out	0.24	0.17	0.10	0.16	0.17
5:11	Other Rigid Containers - #6 PS foam take out	3.10	0.07	0.01	0.04	0.80
5:12	Other Rigid Containers - #6 PS foam packaging	1.01	0.85	0.86	1.57	1.25
5:13	Other Rigid Containers - #6 PS rigid packaging	0.15	0.04	0.01	0.09	0.09
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.06	0.11	0.05	0.08	0.08
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.19	0.19	0.07	0.25	0.21
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.07	0.07	0.00	0.06	0.06
5:17	Other Rigid Containers - All other rigid plastic packages	0.37	0.50	0.24	0.74	0.55
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.31	0.07	0.07	0.19	0.19
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.14	0.19	0.10	0.21	0.18
5:20	Film Packaging - commercial stretch wrap	0.00	0.00	0.00	0.21	0.10
5:21	Film Packaging - Laminates	4.62	4.47	3.88	5.30	4.85
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags - reused	1.00	0.36	0.34	0.46	0.57
5:23	Film Non Packaging - Polyethylene plastic bags and film	3.22	2.96	3.77	2.59	2.94
5:24	Durable Plastic Products - Non-packaging	1.31	2.09	1.72	3.51	2.56
5:25	Durable Plastic Products - Vinyl Siding	0.00	0.00	0.00	0.00	0.00
Category 5 - Plastics		16.82	13.69	11.61	17.12	15.93
Category 6 - Organic Waste						
6:1	Food waste - Backyard Compostable	26.14	13.36	4.11	5.73	11.58
6:2	Food Waste - Kitchen Waste	21.95	26.29	8.00	16.82	18.18
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.00	0.00	0.00	0.00
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.00	0.00	0.00	0.00	0.00
6:6	Yard Waste (<3" diameter)	0.60	0.12	0.00	1.45	0.89
6:7	Animal Faeces	1.02	0.92	0.00	0.81	0.78
6:8	Other organic waste	0.31	3.34	0.00	0.91	0.95
Category 6 - Organic Waste		50.01	44.02	12.11	25.72	32.38
Category 7 - Wood and Wood Products						
7:1	Pallets/skids	0.00	0.00	0.00	0.08	0.04
7:2	Wood shingles	0.00	0.00	0.00	0.00	0.00
7:3	Wood furniture (>80% wood)	0.00	0.00	4.91	0.13	0.68
7:4	Other wood - Clean	0.00	0.00	3.77	2.97	1.96
7:5	Other wood - Contaminated	0.91	0.00	7.25	3.75	3.01
Category 7 - Wood and Wood Products		0.91	0.00	15.94	6.93	5.68
Category 8 - Construction/Demolition Material						
8:1	Drywall	0.00	0.00	0.71	0.00	0.09
8:2	Asphalt shingles	0.00	0.00	0.00	0.06	0.03
8:3	Carpet & underlay	0.00	0.00	0.00	2.74	1.37
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.00	0.00	0.00	0.17	0.09
8:5	Rock/sand/dirt	0.00	0.00	0.00	0.00	0.00
8:6	Other C/D wastes	0.78	0.00	0.30	5.91	3.19
Category 8 - Construction/Demolition Material		0.78	0.00	1.01	8.88	4.76

Table C-3. Waste Composition Electoral Areas

		Mayne Island	Pender Island	Port Renfrew	Salt Spring Island	Total
		(%)	(%)	(%)	(%)	(%)
		(N=2)	(N=1)	(N=1)	(N=4)	(N=8)
Category 9 - Textiles						
9:1	Clothing	5.18	1.00	17.68	2.51	4.88
9:2	Footwear	1.38	0.00	1.52	1.13	1.10
9:3	Other textiles	1.87	0.91	10.74	5.51	4.68
Category 9 - Textiles		8.43	1.91	29.94	9.15	10.66
Category 10 - Rubber						
10:1	Vehicle tires	0.00	0.00	0.00	0.00	0.00
10:2	Other rubber products	0.14	0.00	2.58	0.70	0.71
Category 10 - Rubber		0.14	0.00	2.58	0.70	0.71
Category 11 - Composite Products						
11:1	Disposable diapers	3.74	2.24	4.11	2.19	2.82
11:2	Furniture	0.00	0.00	0.98	0.17	0.21
11:3	Other composites, Q-tips.....	0.73	0.22	3.27	1.00	1.12
Category 11 - Composite Products		4.47	2.46	8.36	3.37	4.15
Category 12 - Hazardous Wastes						
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.00	0.00	0.06	0.00	0.01
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.00	0.00	0.00	0.00
12:3	Batteries - automotive (lead acid)	0.00	0.00	0.00	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.21	0.00	0.03	0.11	0.11
12:5	Batteries - Rechargeable	0.00	0.00	0.00	0.00	0.00
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.00	0.00	0.00	0.00	0.00
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.00	0.00	0.00	0.07	0.04
12:8	Oil Filter - Automotive (include number of units)	0.00	0.00	0.00	0.00	0.00
12:9	Paint - Latex, including containers, PCA	0.00	0.00	0.00	0.00	0.00
12:10	Paint - Empty latex paint containers (PCA)	0.00	0.00	0.00	0.04	0.02
12:11	Paint - Oil-based, including containers, (PCA)	0.00	0.08	0.00	0.00	0.01
12:12	Paint - Empty oil based paint containers, (PCA)	0.09	0.00	0.00	0.00	0.02
12:13	Paint - (non PCA) paint including container	0.00	0.00	0.00	0.00	0.00
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.00	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.00	0.00	0.00	0.00	0.00
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.00	0.00	0.00	0.00
12:21	Solvents including containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.04	0.00	0.00	0.09	0.05
12:28	Needles & Sharps	0.00	0.00	0.00	0.02	0.01
12:29	Other empty aerosol cans (not applicable to above categories)	0.32	0.12	0.06	0.20	0.20
12:30	Other hazardous waste (record description)	0.19	0.07	0.34	0.09	0.14
Category 12 - Hazardous Wastes		0.85	0.28	0.49	0.61	0.61

Table C-3. Waste Composition Electoral Areas

		Mayne Island	Pender Island	Port Renfrew	Salt Spring Island	Total
		(%)	(%)	(%)	(%)	(%)
		(N=2)	(N=1)	(N=1)	(N=4)	(N=8)
Category 13 - Electronics						
13:1	Display Devices (monitors/TVs) less than 30"	0.00	0.00	0.00	0.00	0.00
13:2	Display Devices (monitors/TVs) more than 30"	0.00	0.00	0.00	0.00	0.00
13:3	Computers (desktops, laptops, desktop servers)	0.00	0.00	0.00	0.00	0.00
13:4	Desktop Computer printers, copiers, faxes,	0.00	0.54	0.00	0.00	0.07
13:5	Computer scanners	0.00	0.00	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)	0.24	0.00	0.00	0.00	0.06
13:7	Personal/Portable audio/video playback and/or recording devices	0.00	0.00	0.00	0.94	0.47
13:8	Vehicle audio/video devices	0.00	0.00	0.00	0.00	0.00
13:9	Home audio/video playback and/or recording systems	0.00	0.00	0.00	0.00	0.00
13:10	Non-cellular telephones and answering machines	0.00	0.60	0.00	0.09	0.12
13:11	Cell phones, PDAs and pagers	0.00	0.00	0.00	0.00	0.00
13:12	Other miscellaneous electronics - consumer	0.26	1.51	0.00	0.31	0.41
13:13	Other miscellaneous electronics - commercial	0.00	0.00	0.00	0.00	0.00
13:14	Small appliances	0.00	0.00	0.00	0.42	0.21
Category 13 - Electronics		0.49	2.66	0.00	1.75	1.33
Category 14 - Other						
14:1	Cat litter	0.57	1.34	4.75	4.06	2.93
14:2	Non-distinct fines	1.96	2.25	2.24	1.11	1.60
14:3	Other wastes, dental floss,	0.00	0.00	0.00	0.00	0.00
Category 14 - Other		2.53	3.59	6.99	5.16	4.54
Total		100	100	100	100	100

Table C-4. Residential Waste Composition By Type 2009-2010 (Special Study Samples)

		APPARTMENTS	SINGLE FAMILY	ELECTORAL AREAS	TOTAL (*)
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=24)	(N=14)	(N=8)	(N=98)
Category 1 - Paper and Paperboard					
1:1	Newsprint (including flyers)	2.07	0.85	1.06	1.38
1:2	Magazines and mixed recyclable paper	3.04	1.81	3.13	2.74
1:3	Corrugated cardboard	0.83	0.66	0.59	0.74
1:4	Pizza boxes	0.24	0.23	0.00	0.23
1:5	Waxed corrugated cardboard	0.00	0.04	0.00	0.06
1:6	Boxboard	1.99	1.31	1.35	1.53
1:7	Telephone books	0.13	0.00	0.00	0.08
1:8	Books	0.18	0.08	0.30	0.22
1:9	Fine paper	0.21	0.12	0.22	0.28
1:10	Tissue paper, paper towels, napkins	5.07	4.68	4.76	4.69
1:11	Feminine Hygiene Products	0.53	0.80	0.15	0.39
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.46	0.66	0.20	0.56
1:13	Gabletop Cartons - Juice & Other	0.02	0.03	0.02	0.05
1:14	Aseptic boxes - Milk and Milk Substitutes	0.09	0.12	0.09	0.09
1:15	Aseptic boxes - Juice & Other	0.09	0.09	0.04	0.08
1:16	Brown kraft paper, including bags	0.48	0.55	0.36	0.50
1:17	Paper Cups	0.31	0.35	0.15	0.43
1:18	Other paper (non-recyclable)	0.94	1.71	1.49	1.40
Category 1 - Paper and Paperboard		16.68	14.10	13.92	15.47
Category 2 - Glass					
2:1	Beverage Containers - alcoholic	0.30	0.27	0.33	0.35
2:2	Beverage Containers - non alcoholic	0.10	0.06	0.23	0.10
2:3	Food Containers	0.95	0.68	0.86	0.72
2:4	Other Glass Containers	0.05	0.19	0.23	0.11
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	1.50	1.11	0.96	1.10
Category 2 - Glass		2.91	2.31	2.61	2.37
Category 3 - Ferrous Metals					
3:1	Beverage Containers - alcoholic	0.00	0.00	0.00	0.00
3:2	Beverage Containers - non alcoholic	0.03	0.00	0.01	0.01
3:3	Food Containers	0.73	0.45	0.63	0.62
3:4	Large metal appliances (white goods)	0.00	0.00	0.00	0.00
3:5	Other ferrous metals	2.18	0.73	0.97	1.96
Category 3 - Ferrous Metals		2.94	1.18	1.61	2.59
Category 4 - Non-ferrous Metals					
4:1	Beverage Containers - non alcoholic	0.04	0.05	0.06	0.06
4:2	Beverage Containers - alcoholic	0.05	0.05	0.07	0.05
4:3	Food Containers	0.05	0.05	0.06	0.06
4:4	Aluminum trays & foil	0.49	0.50	0.66	0.49
4:5	Other non-ferrous metals	0.22	0.21	0.26	0.19
Category 4 - Non-ferrous Metals		0.86	0.87	1.12	0.85

Table C-4. Residential Waste Composition By Type 2009-2010 (Special Study Samples)

		APPARTMENTS	SINGLE FAMILY	ELECTORAL AREAS	TOTAL (*)
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=24)	(N=14)	(N=8)	(N=98)
Category 5 - Plastics					
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.12	0.08	0.18	0.13
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.44	0.28	0.28	0.30
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.03	0.01	0.03	0.03
5:4	Milk Jugs - HDPE	0.21	0.12	0.05	0.13
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.54	0.31	0.44	0.44
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.02	0.00	0.00	0.02
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.14	0.11	0.05	0.14
5:8	Other Rigid Containers - PET Food take out (#1)	0.04	0.02	0.00	0.04
5:9	Other Rigid Containers - PET Other food containers (#1)	0.32	0.28	0.29	0.29
5:10	Other Rigid Containers - #6 PS rigid take out	0.38	0.33	0.17	0.34
5:11	Other Rigid Containers - #6 PS foam take out	0.12	0.07	0.80	0.19
5:12	Other Rigid Containers - #6 PS foam packaging	0.76	0.82	1.25	0.78
5:13	Other Rigid Containers - #6 PS rigid packaging	0.22	0.20	0.09	0.16
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.10	0.12	0.08	0.16
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.39	0.33	0.21	0.32
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.15	0.05	0.06	0.09
5:17	Other Rigid Containers - All other rigid plastic packages	0.49	0.39	0.55	0.45
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.30	0.29	0.19	0.32
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.19	0.25	0.18	0.20
5:20	Film Packaging - commercial stretch wrap	0.01	0.00	0.10	0.05
5:21	Film Packaging - Laminates	3.02	4.12	4.85	3.96
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags - reused	1.29	1.31	0.57	0.92
5:23	Film Non Packaging - Polyethylene plastic bags and film	2.67	3.02	2.94	2.84
5:24	Durable Plastic Products - Non-packaging	1.05	1.18	2.56	1.63
5:25	Durable Plastic Products - Vinyl Siding	0.00	0.00	0.00	0.01
Category 5 - Plastics		13.03	13.71	15.93	13.95
Category 6 - Organic Waste					
6:1	Food waste - Backyard Compostable	13.16	9.69	11.58	9.54
6:2	Food Waste - Kitchen Waste	19.42	20.26	18.18	18.90
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.00	0.00	0.00
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.05	0.06	0.00	0.04
6:6	Yard Waste (<3" diameter)	2.99	4.40	0.89	3.50
6:7	Animal Faeces	0.63	3.22	0.78	1.57
6:8	Other organic waste	0.66	2.10	0.95	1.01
Category 6 - Organic Waste		36.92	39.73	32.38	34.56
Category 7 - Wood and Wood Products					
7:1	Pallets/skids	0.00	0.00	0.04	0.00
7:2	Wood shingles	0.00	0.00	0.00	0.00
7:3	Wood furniture (>80% wood)	0.20	0.00	0.68	0.74
7:4	Other wood - Clean	0.26	0.39	1.96	1.44
7:5	Other wood - Contaminated	1.76	0.86	3.01	1.71
Category 7 - Wood and Wood Products		2.22	1.25	5.68	3.90
Category 8 - Construction/Demolition Material					
8:1	Drywall	0.00	0.02	0.09	0.17
8:2	Asphalt shingles	0.00	0.00	0.03	0.41
8:3	Carpet & underlay	0.74	1.67	1.37	1.48
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.18	0.01	0.09	0.16
8:5	Rock/sand/dirt	0.00	0.00	0.00	0.06
8:6	Other C/D wastes	0.58	0.81	3.19	1.14
Category 8 - Construction/Demolition Material		1.50	2.51	4.76	3.43

Table C-4. Residential Waste Composition By Type 2009-2010 (Special Study Samples)

		APPARTMENTS	SINGLE FAMILY	ELECTORAL AREAS	TOTAL (*)
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=24)	(N=14)	(N=8)	(N=98)
Category 9 - Textiles					
9:1	Clothing	2.97	2.11	4.88	2.83
9:2	Footwear	0.79	0.56	1.10	0.81
9:3	Other textiles	2.35	1.71	4.68	2.86
Category 9 - Textiles		6.11	4.38	10.66	6.50
Category 10 - Rubber					
10:1	Vehicle tires	0.00	0.00	0.00	0.00
10:2	Other rubber products	0.11	0.19	0.71	0.42
Category 10 - Rubber		0.11	0.19	0.71	0.42
Category 11 - Composite Products					
11:1	Disposable diapers	2.61	7.95	2.82	4.89
11:2	Furniture	0.55	0.37	0.21	0.42
11:3	Other composites, Q-tips.....	1.27	1.18	1.12	1.39
Category 11 - Composite Products		4.43	9.50	4.15	6.69
Category 12 - Hazardous Wastes					
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.01	0.00	0.01	0.00
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.00	0.00	0.00
12:3	Batteries - automotive (lead acid)	0.00	0.00	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.10	0.11	0.11	0.17
12:5	Batteries - Rechargeable	0.00	0.00	0.00	0.01
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.09	0.00	0.00	0.03
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.00	0.00	0.04	0.02
12:8	Oil Filter - Automotive (include number of units)	0.00	0.00	0.00	0.00
12:9	Paint - Latex, including containers, PCA	0.06	0.05	0.00	0.03
12:10	Paint - Empty latex paint containers (PCA)	0.00	0.00	0.02	0.02
12:11	Paint - Oil-based, including containers, (PCA)	0.03	0.00	0.01	0.10
12:12	Paint - Empty oil based paint containers, (PCA)	0.02	0.00	0.02	0.01
12:13	Paint - (non PCA) paint including container	0.00	0.00	0.00	0.01
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.01	0.00	0.00	0.01
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.00	0.00	0.00
12:21	Solvents including containers (non PCA)	0.00	0.00	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.02	0.01	0.05	0.05
12:28	Needles & Sharps	0.02	0.00	0.01	0.01
12:29	Other empty aerosol cans (not applicable to above categories)	0.22	0.16	0.20	0.21
12:30	Other hazardous waste (record description)	0.07	0.01	0.14	0.17
Category 12 - Hazardous Wastes		0.68	0.35	0.61	0.85

Table C-4. Residential Waste Composition By Type 2009-2010 (Special Study Samples)

		APPARTMENTS	SINGLE FAMILY	ELECTORAL AREAS	TOTAL (*)
		Mean (%)	Mean (%)	Mean (%)	Mean (%)
		(N=24)	(N=14)	(N=8)	(N=98)
Category 13 - Electronics					
13:1	Display Devices (monitors/TVs) less than 30"	1.97	0.00	0.00	0.49
13:2	Display Devices (monitors/TVs) more than 30"	0.00	0.07	0.00	0.01
13:3	Computers (desktops, laptops, desktop servers)	0.02	0.00	0.00	0.06
13:4	Desktop Computer printers, copiers, faxes,	0.00	0.00	0.07	0.02
13:5	Computer scanners	0.00	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)	0.03	0.00	0.06	0.02
13:7	Personal/Portable audio/video playback and/or recording devices	0.20	0.00	0.47	0.20
13:8	Vehicle audio/video devices	0.00	0.00	0.00	0.00
13:9	Home audio/video playback and/or recording systems	0.00	0.12	0.00	0.05
13:10	Non-cellular telephones and answering machines	0.00	0.02	0.12	0.02
13:11	Cell phones, PDAs and pagers	0.00	0.01	0.00	0.01
13:12	Other miscellaneous electronics - consumer	0.89	0.29	0.41	0.42
13:13	Other miscellaneous electronics - commercial	0.00	0.00	0.00	0.07
13:14	Small appliances	0.71	0.00	0.21	0.38
Category 13 - Electronics		3.82	0.50	1.33	1.76
Category 14 - Other					
14:1	Cat litter	4.46	6.65	2.93	4.18
14:2	Non-distinct fines	3.34	2.79	1.60	2.35
14:3	Other wastes, dental floss,	0.00	0.00	0.00	0.12
Category 14 - Other		7.80	9.44	4.54	6.65
Total		100	100	100	100

Note: (*) Total residential waste composition was based on all collected residential waste samples.

APPENDIX D
Detailed Result Tables
Special ICI Study

Table D-1. Waste Composition Select ICI Generators 1-6.

ICI Generator ID Sample Number Sorting Season		ICI-1		ICI-2		ICI-3		ICI-4		ICI-5		ICI-6	
		13-4	11-1	13-4	15-4	17-4	19-1	20-1	19-3	15-2	19-4	19-4	
		Fall	Spring	Fall	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(N=1)	N=1	(N=1)	(N=1)	N=1	(N=1)	N=1	(N=1)	(N=1)	(N=1)	(N=1)	
Category 1 - Paper and Paperboard													
1:1	Newsprint (including flyers)	2.40	0.70	4.01	0.00	1.40	0.00	0.00	0.28	0.00	5.05	0.00	
1:2	Magazines and mixed recyclable paper	2.61	0.35	1.11	0.83	1.32	0.23	1.06	0.84	1.08	0.00	4.76	
1:3	Corrugated cardboard	0.71	0.41	0.15	0.00	0.23	0.00	0.49	1.40	7.32	0.00	0.00	
1:4	Pizza boxes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1:5	Waxed corrugated cardboard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1:6	Boxboard	0.56	0.30	2.37	1.56	0.47	0.23	0.00	0.42	0.54	2.72	3.17	
1:7	Telephone books	0.00	0.00	0.00	0.00	0.00	0.00	1.31	0.00	0.00	0.00	0.00	
1:8	Books	0.00	0.35	0.37	0.00	0.00	0.00	0.00	0.00	7.85	0.00	0.00	
1:9	Fine paper	0.00	0.16	0.00	0.00	0.29	0.05	0.18	0.15	0.00	4.54	3.49	
1:10	Tissue paper, paper towels, napkins	10.69	7.18	15.64	18.34	18.26	6.39	23.00	23.19	16.25	18.56	25.24	
1:11	Feminine Hygiene Products	0.08	0.00	0.04	0.00	0.00	0.06	0.14	0.00	0.00	0.00	0.63	
1:12	Gabletop Cartons - Milk and Milk Substitutes	1.62	0.71	0.39	0.00	0.09	0.13	0.18	0.22	0.13	0.00	0.00	
1:13	Gabletop Cartons - Juice & Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1:14	Aseptic boxes - Milk and Milk Substitutes	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	
1:15	Aseptic boxes - Juice & Other	0.00	0.00	0.06	0.00	0.00	0.00	0.07	0.06	0.30	0.00	0.00	
1:16	Brown kraft paper, including bags	0.13	0.08	0.13	0.17	0.06	0.10	0.23	0.34	0.46	0.00	0.00	
1:17	Paper Cups	0.00	1.09	4.92	2.58	1.37	0.83	2.83	1.02	0.19	1.32	1.27	
1:18	Other paper (non-recyclable)	1.10	0.54	5.24	0.42	0.72	0.41	2.14	1.48	1.21	1.79	1.90	
Category 1 - Paper and Paperboard		19.90	11.87	34.44	23.90	24.20	8.41	31.73	29.39	35.32	33.97	40.48	
Category 2 - Glass													
2:1	Beverage Containers - alcoholic	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	5.72	0.00	0.00	
2:2	Beverage Containers - non alcoholic	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	
2:3	Food Containers	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.18	0.00	3.17	
2:4	Other Glass Containers	0.00	0.00	0.00	0.00	0.25	0.00	0.59	0.00	0.00	0.00	0.00	
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	0.00	0.00	0.00	0.00	0.33	0.00	0.06	0.21	0.34	0.00	0.00	
Category 2 - Glass		0.00	0.25	0.00	0.00	0.67	0.00	1.07	0.21	6.25	0.00	3.17	
Category 3 - Ferrous Metals													
3:1	Beverage Containers - alcoholic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3:2	Beverage Containers - non alcoholic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3:3	Food Containers	0.01	0.00	0.94	0.00	0.09	0.02	0.18	0.25	0.13	0.00	0.00	
3:4	Large metal appliances (white goods)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3:5	Other ferrous metals	0.08	0.00	0.12	0.00	1.57	0.00	2.06	1.55	1.64	0.00	0.00	
Category 3 - Ferrous Metals		0.10	0.00	1.05	0.00	1.66	0.02	2.24	1.80	1.76	0.00	0.00	
Category 4 - Non-ferrous Metals													
4:1	Beverage Containers - non alcoholic	0.00	0.00	0.06	0.00	0.00	0.00	0.15	0.00	0.77	0.16	0.00	
4:2	Beverage Containers - alcoholic	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09	0.00	0.00	
4:3	Food Containers	0.00	0.00	0.00	0.00	0.02	1.55	0.00	0.00	0.03	0.00	0.00	
4:4	Aluminum trays & foil	0.79	0.19	0.09	0.00	0.09	0.02	0.26	0.08	0.13	0.23	0.00	
4:5	Other non-ferrous metals	0.08	0.00	0.00	0.00	0.00	0.13	0.67	0.04	0.00	0.00	0.00	
Category 4 - Non-ferrous Metals		0.87	0.19	0.15	0.00	0.12	1.69	1.11	0.13	1.02	0.39	0.00	

Table D-1. Waste Composition Select ICI Generators 1-6.

ICI Generator ID Sample Number Sorting Season		ICI-1		ICI-2		ICI-3		ICI-4		ICI-5		ICI-6	
		13-4	11-1	13-4	15-4	17-4	19-1	20-1	19-3	15-2	19-4	19-4	
		Fall	Spring	Fall	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(N=1)	N=1	(N=1)	(N=1)	N=1	(N=1)	N=1	(N=1)	(N=1)	(N=1)	(N=1)	
Category 5 - Plastics													
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.08	0.00	0.39	0.00	0.09	0.00	0.26	0.15	0.13	0.04	0.00	
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.30	0.18	0.01	0.00	0.00	0.18	0.10	0.50	0.13	0.00	0.00	
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.00	0.00	0.31	0.00	0.00	0.03	0.06	0.07	0.08	0.00	0.00	
5:4	Milk Jugs - HDPE	0.06	0.00	0.00	0.00	0.00	0.03	0.10	0.00	0.29	0.00	0.00	
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.16	0.00	0.09	0.00	0.60	0.18	0.43	0.71	0.56	0.12	0.63	
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.15	0.29	0.00	0.00	
5:8	Other Rigid Containers - PET Food take out (#1)	0.00	0.00	0.43	0.00	0.00	0.05	0.11	0.13	0.00	0.16	0.00	
5:9	Other Rigid Containers - PET Other food containers (#1)	0.20	0.00	0.13	0.00	0.10	0.00	0.83	0.13	0.14	0.00	0.00	
5:10	Other Rigid Containers - #6 PS rigid take out	1.54	0.00	1.16	0.35	0.37	0.27	0.15	0.41	0.68	0.16	1.11	
5:11	Other Rigid Containers - #6 PS foam take out	0.11	0.00	0.01	0.11	0.05	0.03	0.00	0.11	0.13	0.00	0.63	
5:12	Other Rigid Containers - #6 PS foam packaging	0.63	0.02	1.34	0.83	0.17	1.53	0.57	0.98	1.08	0.78	7.94	
5:13	Other Rigid Containers - #6 PS rigid packaging	1.17	0.18	0.03	0.33	0.05	0.00	0.00	0.22	0.13	0.08	0.00	
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.00	0.86	0.13	0.04	0.10	0.09	0.11	0.06	0.05	0.00	0.00	
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.01	0.00	0.16	0.00	0.13	0.13	0.34	0.36	0.24	0.43	0.00	
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5:17	Other Rigid Containers - All other rigid plastic packages	0.23	0.00	0.09	0.11	0.87	0.07	0.18	0.22	0.24	0.04	1.90	
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	1.21	0.07	0.16	0.00	0.00	0.07	0.00	0.08	0.00	0.00	0.00	
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.16	0.00	0.09	0.00	0.00	0.13	0.10	0.08	0.00	0.23	0.00	
5:20	Film Packaging - commercial stretch wrap	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.97	0.00	0.00	
5:21	Film Packaging - Laminates	3.60	4.15	3.27	1.29	2.10	0.51	3.36	2.24	5.70	0.78	15.87	
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags reused	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00	
5:23	Film Non Packaging - Polyethylene plastic bags and film	3.17	1.87	7.27	2.67	3.58	1.65	5.97	4.47	3.87	3.11	4.76	
5:24	Durable Plastic Products - Non-packaging	0.00	0.00	0.37	0.92	1.52	7.05	3.90	3.42	2.32	2.14	4.13	
5:25	Durable Plastic Products - Vinyl Siding	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Category 5 - Plastics		12.62	7.32	15.45	6.64	9.84	12.04	17.37	15.48	17.02	8.04	36.98	
Category 6 - Organic Waste													
6:1	Food waste - Backyard Compostable	1.69	12.97	7.94	2.94	3.27	2.39	15.96	5.66	5.06	2.33	4.76	
6:2	Food Waste - Kitchen Waste	39.98	57.88	33.77	2.76	5.36	1.53	3.85	11.67	6.67	7.96	0.00	
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6:6	Yard Waste (<3" diameter)	8.39	0.00	0.00	2.67	2.02	0.00	0.00	0.00	0.00	0.00	0.00	
6:7	Animal Faeces	0.00	0.00	0.00	0.66	4.21	68.22	0.00	0.00	0.00	0.00	0.00	
6:8	Other organic waste	0.79	0.00	0.31	0.00	1.18	0.00	1.41	1.34	1.10	0.00	0.00	
Category 6 - Organic Waste		50.85	70.84	42.02	9.03	16.05	72.14	21.21	18.67	12.83	10.29	4.76	
Category 7 - Wood and Wood Products													
7:1	Pallets/skids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7:2	Wood shingles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7:3	Wood furniture (>80% wood)	0.00	0.00	0.00	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7:4	Other wood - Clean	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	
7:5	Other wood - Contaminated	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.74	4.30	0.00	0.00	
Category 7 - Wood and Wood Products		0.00	0.00	0.00	2.76	0.00	0.00	0.74	11.74	4.30	0.00	0.00	
Category 8 - Construction/Demolition Material													
8:1	Drywall	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8:2	Asphalt shingles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8:3	Carpet & underlay	0.00	0.00	0.00	0.00	0.00	0.00	4.66	0.00	0.00	0.00	0.00	
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8:5	Rock/sand/dirt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8:6	Other C/D wastes	0.00	0.00	0.00	5.21	0.00	0.00	4.03	0.29	0.00	10.91	0.00	
Category 8 - Construction/Demolition Material		0.00	0.00	0.00	5.21	0.00	0.00	8.69	0.29	0.00	10.91	0.00	

Table D-1. Waste Composition Select ICI Generators 1-6.

ICI Generator ID Sample Number Sorting Season		ICI-1		ICI-2		ICI-3		ICI-4		ICI-5		ICI-6	
		13-4	11-1	13-4	15-4	17-4	19-1	20-1	19-3	15-2	19-4	19-4	
		Fall	Spring	Fall	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(N=1)	N=1	(N=1)	(N=1)	N=1	(N=1)	N=1	(N=1)	(N=1)	(N=1)	(N=1)	(N=1)
Category 9 - Textiles													
9:1	Clothing	0.00	0.00	0.00	0.00	0.00	0.06	0.46	1.89	0.00	0.00	0.00	0.00
9:2	Footwear	0.75	0.00	0.00	0.00	0.00	0.00	0.00	1.48	0.00	0.00	0.00	0.00
9:3	Other textiles	0.00	0.00	0.82	3.31	2.99	0.11	1.88	11.81	3.66	3.11	3.17	
Category 9 - Textiles		0.75	0.00	0.82	3.31	2.99	0.17	2.34	15.18	3.66	3.11	3.17	
Category 10 - Rubber													
10:1	Vehicle tires	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.92	0.00	0.00	0.00
10:2	Other rubber products	0.04	0.00	0.42	3.00	3.59	1.40	1.82	2.14	5.29	26.90	11.43	
Category 10 - Rubber		0.04	0.00	0.42	3.00	3.59	1.40	1.82	2.14	11.21	26.90	11.43	
Category 11 - Composite Products													
11:1	Disposable diapers	0.00	0.00	1.93	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
11:2	Furniture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11:3	Other composites, Q-tips.....	1.99	5.44	0.00	15.27	0.33	2.68	0.43	1.55	0.00	0.00	0.00	0.00
Category 11 - Composite Products		1.99	5.44	1.93	15.27	0.33	2.68	0.75	1.55	0.00	0.00	0.00	0.00
Category 12 - Hazardous Wastes													
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:3	Batteries - automotive (lead acid)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargeable household batt.	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.03	0.00	0.00	0.00
12:5	Batteries - Rechargeable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.95	0.00	0.00	0.00
12:8	Oil Filter - Automotive (include number of units)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:9	Paint - Latex, including containers, PCA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:10	Paint - Empty latex paint containers (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:11	Paint - Oil-based, including containers, (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00
12:12	Paint - Empty oil based paint containers, (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:13	Paint - (non PCA) paint including container	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00
12:21	Solvents including containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:28	Needles & Sharps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12:29	Other empty aerosol cans (not applicable to above categories)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
12:30	Other hazardous waste (record description)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Category 12 - Hazardous Wastes		0.00	0.00	0.00	0.00	0.00	0.06	1.06	0.13	5.30	0.16	0.00	

Table D-1. Waste Composition Select ICI Generators 1-6.

ICI Generator ID Sample Number Sorting Season		ICI-1		ICI-2		ICI-3		ICI-4		ICI-5		ICI-6	
		13-4	11-1	13-4	15-4	17-4	19-1	20-1	19-3	15-2	19-4	19-4	
		Fall	Spring	Fall	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
		(N=1)	N=1	(N=1)	(N=1)	N=1	(N=1)	N=1	(N=1)	(N=1)	(N=1)	(N=1)	
Category 13 - Electronics													
13:1	Display Devices (monitors/TVs) less than 30"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:2	Display Devices (monitors/TVs) more than 30"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:3	Computers (desktops, laptops, desktop servers)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:4	Desktop Computer printers, copiers, faxes,	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:5	Computer scanners	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:6	Computer Peripherals (keyboards, mice)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:7	Personal/Portable audio/video playback and/or recording devices	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:8	Vehicle audio/video devices	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:9	Home audio/video playback and/or recording systems	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	
13:10	Non-cellular telephones and answering machines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:11	Cell phones, PDAs and pagers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:12	Other miscellaneous electronics - consumer	4.02	0.00	0.00	0.00	0.00	0.00	1.23	0.00	0.22	0.00	0.00	
13:13	Other miscellaneous electronics - commercial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13:14	Small appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Category 13 - Electronics		4.02	0.00	0.00	0.00	0.00	0.11	1.23	0.00	0.22	0.00	0.00	
Category 14 - Other													
14:1	Cat litter	3.17	0.00	0.00	27.54	31.57	0.00	6.73	0.00	0.00	0.00	0.00	
14:2	Non-distinct fines	5.68	4.10	3.73	3.33	0.95	1.26	1.90	3.30	1.10	6.25	0.00	
14:3	Other wastes, dental floss,	0.00	0.00	0.00	0.00	8.02	0.00	0.00	0.00	0.00	0.00	0.00	
Category 14 - Other		8.86	4.10	3.73	30.87	40.55	1.26	8.63	3.30	1.10	6.25	0.00	
Total		100	100	100	100	100	100	100	100	100	100	100	

Table D-2. Waste Composition Select ICI Generators 7-10.

ICI Generator ID Sample Number Sorting Season		ICI-7	ICI-8	ICI-9	ICI-10
		9-2	14-2	18-2	4-3
		Spring	Spring	Spring	Spring
		(%)	(%)	(%)	(%)
		(N=1)	(N=1)	(N=1)	(N=1)
Category 1 - Paper and Paperboard					
1:1	Newsprint (including flyers)	2.47	2.27	1.03	0.00
1:2	Magazines and mixed recyclable paper	7.45	7.16	13.88	0.47
1:3	Corrugated cardboard	0.30	1.54	0.28	11.00
1:4	Pizza boxes	0.00	0.00	0.00	0.30
1:5	Waxed corrugated cardboard	1.08	0.00	0.00	0.00
1:6	Boxboard	1.73	1.47	2.16	2.19
1:7	Telephone books	0.00	0.00	0.00	0.00
1:8	Books	0.00	0.11	0.00	0.00
1:9	Fine paper	0.71	0.48	0.00	0.00
1:10	Tissue paper, paper towels, napkins	2.60	9.13	0.00	4.70
1:11	Feminine Hygiene Products	0.17	0.00	18.09	0.00
1:12	Gabletop Cartons - Milk and Milk Substitutes	0.22	0.08	0.11	0.00
1:13	Gabletop Cartons - Juice & Other	0.04	0.03	0.00	0.00
1:14	Aseptic boxes - Milk and Milk Substitutes	0.00	0.00	0.00	0.00
1:15	Aseptic boxes - Juice & Other	0.18	0.12	0.00	0.00
1:16	Brown kraft paper, including bags	0.08	0.79	0.22	0.00
1:17	Paper Cups	2.82	2.01	1.30	1.53
1:18	Other paper (non-recyclable)	5.25	1.95	1.99	4.39
Category 1 - Paper and Paperboard		25.08	27.14	39.07	24.57
Category 2 - Glass					
2:1	Beverage Containers - alcoholic	0.00	0.35	0.00	0.00
2:2	Beverage Containers - non alcoholic	0.00	0.68	0.00	0.00
2:3	Food Containers	0.00	0.11	0.30	0.00
2:4	Other Glass Containers	0.22	0.48	0.00	0.00
2:5	Other glass and ceramics (plate, mirrors, light bulbs, ceramics)	2.29	0.48	0.54	0.00
Category 2 - Glass		2.50	2.11	0.84	0.00
Category 3 - Ferrous Metals					
3:1	Beverage Containers - alcoholic	0.00	0.00	0.16	0.00
3:2	Beverage Containers - non alcoholic	0.00	0.00	0.00	0.00
3:3	Food Containers	1.10	0.55	0.77	1.85
3:4	Large metal appliances (white goods)	0.00	0.00	0.00	0.00
3:5	Other ferrous metals	0.22	0.62	4.44	0.04
Category 3 - Ferrous Metals		1.32	1.16	5.37	1.89
Category 4 - Non-ferrous Metals					
4:1	Beverage Containers - non alcoholic	0.00	0.12	0.03	0.00
4:2	Beverage Containers - alcoholic	0.00	0.00	0.03	0.00
4:3	Food Containers	0.08	0.02	0.00	0.00
4:4	Aluminum trays & foil	0.61	0.28	0.07	0.31
4:5	Other non-ferrous metals	0.00	0.08	0.00	0.00
Category 4 - Non-ferrous Metals		0.69	0.50	0.12	0.31

Table D-2. Waste Composition Select ICI Generators 7-10.

ICI Generator ID Sample Number Sorting Season		ICI-7	ICI-8	ICI-9	ICI-10
		9-2	14-2	18-2	4-3
		Spring	Spring	Spring	Spring
		(%)	(%)	(%)	(%)
		(N=1)	(N=1)	(N=1)	(N=1)
Category 5 - Plastics					
5:1	Bottles/Jugs - PET beverage bottles (#1) (soft drink, juice)	0.41	0.21	0.11	0.13
5:2	Bottles/Jugs - PET other bottles and jars (#1)	0.32	0.08	0.16	0.31
5:3	Bottles/Jugs - HDPE beverage bottles (#2) (juice)	0.32	0.05	0.00	0.00
5:4	Milk Jugs - HDPE	0.08	0.08	0.11	0.00
5:5	Bottles/Jugs - HDPE other bottles and jugs (#2)	0.61	0.41	0.35	0.43
5:6	Bottles/Jugs - PVC bottles and jars (#3)	0.00	0.00	0.00	0.00
5:7	Bottles/Jugs - other bottles, jars and jugs (#4 LDPE, #5 PP, #7)	0.00	0.21	0.00	0.49
5:8	Other Rigid Containers - PET Food take out (#1)	0.00	0.00	0.00	0.00
5:9	Other Rigid Containers - PET Other food containers (#1)	0.13	0.12	0.92	0.37
5:10	Other Rigid Containers - #6 PS rigid take out	1.38	0.99	1.05	0.34
5:11	Other Rigid Containers - #6 PS foam take out	0.27	0.28	0.68	0.00
5:12	Other Rigid Containers - #6 PS foam packaging	1.58	0.33	0.66	2.31
5:13	Other Rigid Containers - #6 PS rigid packaging	0.00	0.01	0.25	0.01
5:14	Other Rigid Containers - #5 PP wide mouth food take out	0.00	0.05	0.00	0.64
5:15	Other Rigid Containers - Other wide mouth containers and lids (#2, #4, #5)	0.12	0.08	0.00	0.10
5:16	Other Rigid Containers - # 2 HDPE & #5 PP Large pails and lids (4-25L)	2.63	0.21	0.49	0.00
5:17	Other Rigid Containers - All other rigid plastic packages	0.51	0.28	0.11	0.25
5:18	Film Packaging - Polyethylene plastic bags and film - non carry-out bags	0.07	0.05	0.11	0.13
5:19	Film Packaging - Polyethylene retail and grocery carry-out bags empty	0.61	0.21	0.00	0.00
5:20	Film Packaging - commercial stretch wrap	0.39	0.00	0.00	2.72
5:21	Film Packaging - Laminates	10.26	7.76	3.67	8.58
5:22	Film Non Packaging - Polyethylene retail and grocery carry-out bags reused	4.83	0.00	0.00	0.00
5:23	Film Non Packaging - Polyethylene plastic bags and film	4.14	3.55	3.38	4.38
5:24	Durable Plastic Products - Non-packaging	5.31	3.39	0.15	2.76
5:25	Durable Plastic Products - Vinyl Siding	0.00	0.00	0.00	0.00
Category 5 - Plastics		33.96	18.37	12.21	23.93
Category 6 - Organic Waste					
6:1	Food waste - Backyard Compostable	14.79	9.84	10.53	6.74
6:2	Food Waste - Kitchen Waste	11.04	24.29	18.90	32.06
6:3	Food Waste - FOG (Fats-Oil-Grease) - Brown grease	0.00	0.00	0.00	0.00
6:4	Food Waste - FOG (Fats-Oil-Grease) - Yellow grease	0.00	0.00	0.00	0.00
6:6	Yard Waste (<3" diameter)	0.00	0.00	0.00	4.50
6:7	Animal Faeces	0.00	0.00	0.00	0.00
6:8	Other organic waste	0.00	0.21	0.00	0.00
Category 6 - Organic Waste		25.84	34.34	29.43	43.30
Category 7 - Wood and Wood Products					
7:1	Pallets/skids	0.00	0.00	0.00	0.00
7:2	Wood shingles	0.00	0.00	0.00	0.00
7:3	Wood furniture (>80% wood)	0.00	0.00	0.00	0.00
7:4	Other wood - Clean	0.00	2.27	8.27	0.00
7:5	Other wood - Contaminated	0.00	0.00	0.00	0.00
Category 7 - Wood and Wood Products		0.00	2.27	8.27	0.00
Category 8 - Construction/Demolition Material					
8:1	Drywall	0.00	0.00	0.00	0.00
8:2	Asphalt shingles	0.00	0.00	0.00	0.00
8:3	Carpet & underlay	0.00	0.00	0.00	0.00
8:4	Masonry (bricks, blocks, concrete, ceramic)	0.00	0.00	0.00	0.00
8:5	Rock/sand/dirt	0.00	0.00	0.00	0.00
8:6	Other C/D wastes	0.00	0.00	0.00	0.00
Category 8 - Construction/Demolition Material		0.00	0.00	0.00	0.00

Table D-2. Waste Composition Select ICI Generators 7-10.

ICI Generator ID Sample Number Sorting Season		ICI-7	ICI-8	ICI-9	ICI-10
		9-2	14-2	18-2	4-3
		Spring	Spring	Spring	Spring
		(%)	(%)	(%)	(%)
		(N=1)	(N=1)	(N=1)	(N=1)
Category 9 - Textiles					
9:1	Clothing	0.75	1.38	0.00	0.09
9:2	Footwear	1.70	3.43	0.49	0.15
9:3	Other textiles	3.45	0.80	0.94	0.18
Category 9 - Textiles		5.90	5.61	1.43	0.42
Category 10 - Rubber					
10:1	Vehicle tires	0.00	0.00	0.00	0.00
10:2	Other rubber products	0.00	1.49	0.00	0.25
Category 10 - Rubber		0.00	1.49	0.00	0.25
Category 11 - Composite Products					
11:1	Disposable diapers	0.00	0.54	0.14	0.00
11:2	Furniture	0.00	0.00	0.00	0.00
11:3	Other composites, Q-tips.....	0.00	0.88	0.68	1.83
Category 11 - Composite Products		0.00	1.42	0.82	1.83
Category 12 - Hazardous Wastes					
12:1	Fluorescent lighting - CFL (Compact Fluorescent Lamps) bulbs	0.00	0.00	0.00	0.00
12:2	Fluorescent lighting - CFL (Compact Fluorescent Lamps) tubes	0.00	0.00	0.00	0.00
12:3	Batteries - automotive (lead acid)	0.00	0.00	0.00	0.00
12:4	Batteries - Dry cell, alkaline, button cell, other non rechargable household batt.	0.00	0.42	0.00	0.02
12:5	Batteries - Rechargeable	0.00	0.00	0.00	0.00
12:6	Oil - Lubricating (motor, transmission) oil, including containers	0.00	0.00	0.00	0.00
12:7	Oil - Empty Lubricating (motor, transmission) oil containers	0.00	0.00	0.00	0.00
12:8	Oil Filter - Automotive (include number of units)	0.00	0.00	0.00	0.00
12:9	Paint - Latex, including containers, PCA	0.00	0.00	0.00	0.00
12:10	Paint - Empty latex paint containers (PCA)	0.00	0.00	0.00	0.00
12:11	Paint - Oil-based, including containers, (PCA)	0.00	0.00	0.00	0.00
12:12	Paint - Empty oil based paint containers, (PCA)	0.26	0.00	0.00	0.00
12:13	Paint - (non PCA) paint including container	0.00	0.00	0.00	0.00
12:14	Paint - Empty (non PCA) container	0.00	0.00	0.00	0.00
12:15	Paint in aerosol cans (PCA)	0.00	0.00	0.00	0.00
12:16	Paint - Empty aerosol paint cans (PCA)	0.00	0.00	0.00	0.00
12:17	Paint - Aerosol cans (non PCA)	0.00	0.00	0.00	0.00
12:18	Paint - Empty aerosol paint cans (non PCA)	0.00	0.00	0.00	0.00
12:19	Solvents including containers (<10L) (PCA)	0.00	0.00	0.00	0.00
12:20	Solvents - Empty containers (PCA)	0.00	0.00	0.00	0.00
12:21	Solvents including containers (non PCA)	0.00	0.00	0.00	0.00
12:22	Solvents - Empty containers (non PCA)	0.00	0.00	0.00	0.00
12:23	Pesticides including containers (<10L) (PCA)	0.00	0.00	0.00	0.00
12:24	Pesticide - Empty pesticide containers (PCA)	0.00	0.00	0.00	0.00
12:25	Pesticides including containers (non PCA)	0.00	0.00	0.00	0.00
12:26	Pesticide - Empty pesticide containers (non PCA)	0.00	0.00	0.00	0.00
12:27	Pharmaceuticals, including containers	0.00	0.00	0.00	0.12
12:28	Needles & Sharps	0.00	0.00	0.00	0.00
12:29	Other empty aerosol cans (not applicable to above categories)	0.00	0.07	0.08	0.00
12:30	Other hazardous waste (record description)	0.00	0.00	0.00	0.00
Category 12 - Hazardous Wastes		0.26	0.49	0.08	0.14

Table D-2. Waste Composition Select ICI Generators 7-10.

ICI Generator ID Sample Number Sorting Season		ICI-7	ICI-8	ICI-9	ICI-10
		9-2	14-2	18-2	4-3
		Spring	Spring	Spring	Spring
		(%)	(%)	(%)	(%)
		(N=1)	(N=1)	(N=1)	(N=1)
Category 13 - Electronics					
13:1	Display Devices (monitors/TVs) less than 30"	0.00	0.00	0.00	0.00
13:2	Display Devices (monitors/TVs) more than 30"	0.00	0.00	0.00	0.00
13:3	Computers (desktops, laptops, desktop servers)	0.00	0.00	0.00	0.00
13:4	Desktop Computer printers, copiers, faxes,	0.00	2.54	0.00	0.00
13:5	Computer scanners	0.00	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)	0.00	0.00	0.00	0.00
13:7	Personal/Portable audio/video playback and/or recording devices	0.00	0.00	0.00	0.00
13:8	Vehicle audio/video devices	0.00	0.00	0.00	0.00
13:9	Home audio/video playback and/or recording systems	0.00	0.00	0.00	0.00
13:10	Non-cellular telephones and answering machines	0.00	0.00	0.00	0.00
13:11	Cell phones, PDAs and pagers	0.00	0.00	0.00	0.00
13:12	Other miscellaneous electronics - consumer	0.00	1.20	0.00	3.37
13:13	Other miscellaneous electronics - commercial	0.00	0.00	0.00	0.00
13:14	Small appliances	0.00	0.00	0.00	0.00
Category 13 - Electronics		0.00	3.75	0.00	3.37
Category 14 - Other					
14:1	Cat litter	0.00	0.00	0.00	0.00
14:2	Non-distinct fines	4.46	1.35	2.37	0.00
14:3	Other wastes, dental floss,	0.00	0.00	0.00	0.00
Category 14 - Other		4.46	1.35	2.37	0.00
Total		100	100	100	100

Table D-2. Waste Composition Select ICI Generators 7-10.

		ICI Generator ID	ICI-7	ICI-8	ICI-9	ICI-10
		Sample Number	9-2	14-2	18-2	4-3
		Sorting Season	Spring	Spring	Spring	Spring
			(%)	(%)	(%)	(%)
			(N=1)	(N=1)	(N=1)	(N=1)
Category 13 - Electronics						
13:1	Display Devices (monitors/TVs) less than 30"		0.00	0.00	0.00	0.00
13:2	Display Devices (monitors/TVs) more than 30"		0.00	0.00	0.00	0.00
13:3	Computers (desktops, laptops, desktop servers)		0.00	0.00	0.00	0.00
13:4	Desktop Computer printers, copiers, faxes,		0.00	2.54	0.00	0.00
13:5	Computer scanners		0.00	0.00	0.00	0.00
13:6	Computer Peripherals (keyboards, mice)		0.00	0.00	0.00	0.00
13:7	Personal/Portable audio/video playback and/or recording devices		0.00	0.00	0.00	0.00
13:8	Vehicle audio/video devices		0.00	0.00	0.00	0.00
13:9	Home audio/video playback and/or recording systems		0.00	0.00	0.00	0.00
13:10	Non-cellular telephones and answering machines		0.00	0.00	0.00	0.00
13:11	Cell phones, PDAs and pagers		0.00	0.00	0.00	0.00
13:12	Other miscellaneous electronics - consumer		0.00	1.20	0.00	3.37
13:13	Other miscellaneous electronics - commercial		0.00	0.00	0.00	0.00
13:14	Small appliances		0.00	0.00	0.00	0.00
Category 13 - Electronics			0.00	3.75	0.00	3.37
Category 14 - Other						
14:1	Cat litter		0.00	0.00	0.00	0.00
14:2	Non-distinct fines		4.46	1.35	2.37	0.00
14:3	Other wastes, dental floss,		0.00	0.00	0.00	0.00
Category 14 - Other			4.46	1.35	2.37	0.00
Total			100	100	100	100