

Waste Audit REPORT 2012

PUT WASTE IN ITS PLACE



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1. Executive Summary

Measurement of the various materials received at the seven landfills across the province is a critical part of effective planning and monitoring of provincial waste management strategies. RRFB Nova Scotia’s waste audit program, initiated in 2011, facilitates identification and quantification of materials currently disposed of, and which could have had potential use and value if they had been recovered, recycled and/or reused.

Using its own Waste Audit Manual developed during the 2011 project, RRFB Nova Scotia was able to replicate the processes for its 2012 audit, conducted mid-May through the end of August. Over a 14-week period, a total of 84 representative samples were collected from the seven landfills and their associated transfer station(s). The number of samples was evenly split between the **Residential and Industrial, Commercial and Institutional (ICI)** sectors. While sample weight differed for the two sectors – 135 kilograms for Residential and 200 kilograms for ICI – the sorting methodology was consistent for both. Each sample was assessed against a comprehensive sort list under the following 18 broad material category headings:

Table 1.1 List of Material Categories

Fibre	Glass	Special Care Waste (SCW)
Organics	Metal	Redeemable Containers
Diary Containers	Municipal Hazardous and Special Waste (MHSW)	Regulated Paint
Non-dairy Containers	Textiles	Regulated Tires
Plastic	Construction and Demolition (C&D)	Off-road Tires
Disposable Cups	Bulky Items	Regulated Electronics

Within these broad categories were 72 sub-categories and 169 individual line items. (See **Appendix A** for the full Sort/Categorization Guide) Each sample was identified by point of origin (landfill location) and sector (ICI or Residential), and then manually separated with each discernible material (line item) weighed and recorded. Remnant material not specifically listed as a line item, along with floor sweepings, was categorized as “residual waste.” This information populated a master spreadsheet representing the full data set.

Using audited weight sub-totals for each of the 18 broad categories, RRFB Nova Scotia calculated the percentage of the total audited weight that each category represented, and used these percentages to extrapolate annual tonnage figures for these categories by sector based on the data provided by Nova Scotia Environment (NSE).

Figure 1.1 (shown on page 5) illustrates a province-wide comparison of **Residential 2011 vs 2012** and **ICI 2011 vs 2012**, identifying the top six waste categories from Table 1.1, and a seventh “Other” representing the remaining 12 categories.

NOTE: Summer 2012 audit results allow only for a rudimentary year-to-year comparative analysis as seasonality of disposal patterns can impact audit findings and therefore compromise the validity of anything less than a direct season-to-season analysis.

**Table 1.2a ICI Disposal (metric tonnes):
2011 vs. 2012 for Top 6 Categories plus Other**

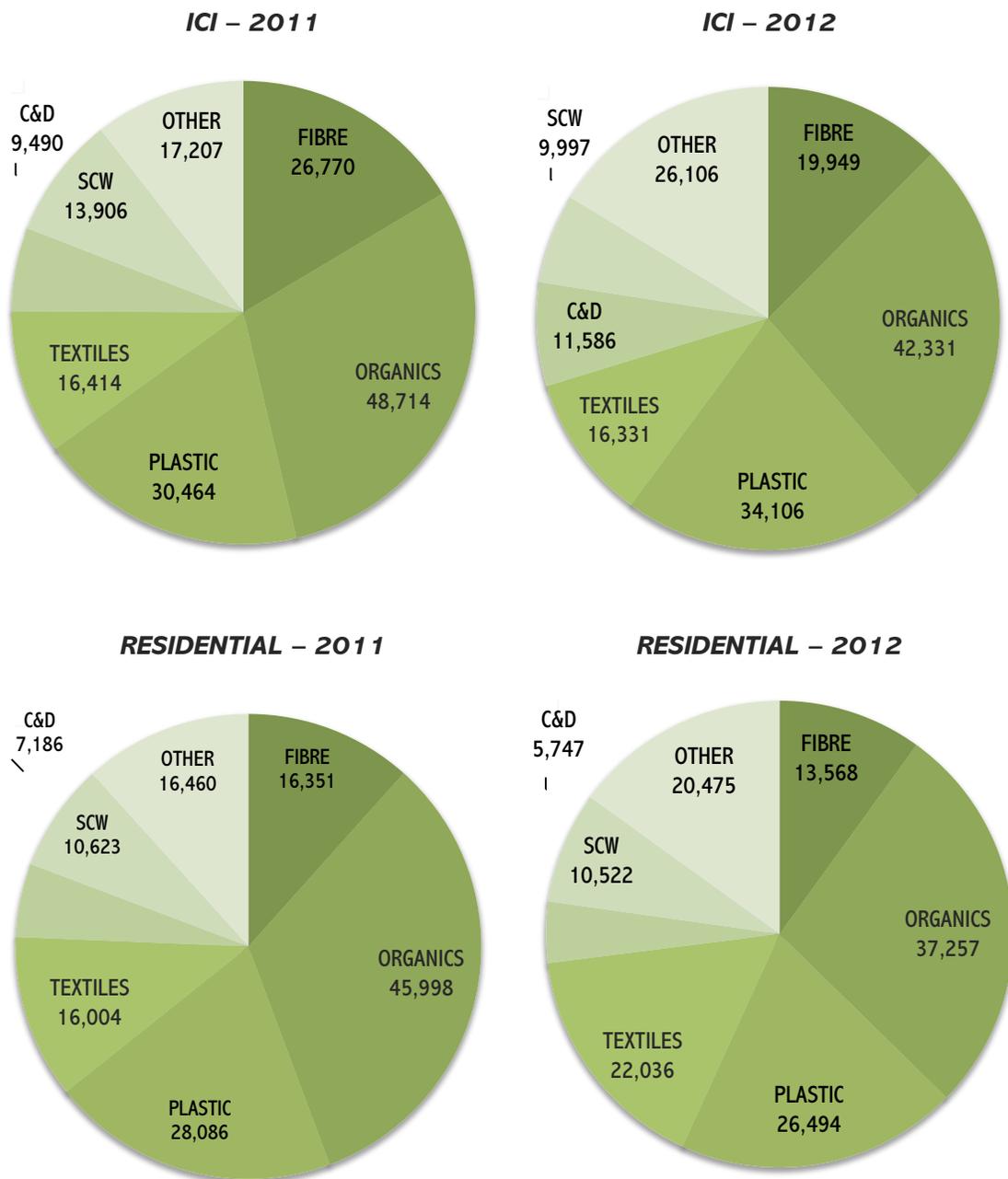
	2011 (tonnes)	% of Total	2012 (tonnes)	% of Total	Absolute (tonnes) (composition)	
FIBRE	26,770	16.43	19,949	12.44	-25.5%	-24.3%
ORGANICS	48,714	29.89	42,331	26.39	-13.1%	-11.7%
PLASTIC	30,464	18.69	34,106	21.26	12.0%	13.8%
TEXTILES	16,414	10.07	16,331	10.18	-0.5%	1.0%
C&D	9,490	5.82	11,586	7.22	22.1%	24.1%
SCW	13,906	8.53	9,997	6.23	-28.1%	-27.0%
OTHER	17,207	10.56	26,106	16.28	51.7%	54.2%
TOTAL	162,965	100.00	160,407	100.00	-1.6%	n/a

**Table 1.2b Residential Disposal (metric tonnes):
2011 vs. 2012 for Top 6 Categories plus Other**

	2011 (tonnes)	% of Total	2012 (tonnes)	% of Total	Absolute (tonnes) (composition)	
FIBRE	16,351	11.62	13,568	9.97	-17.0%	-14.2%
ORGANICS	45,998	32.69	37,257	27.38	-19.0%	-16.2%
PLASTIC	28,086	19.96	26,494	19.47	-5.7%	-2.5%
TEXTILES	16,004	11.37	22,036	16.19	37.7%	42.4%
C&D	7,186	5.11	5,747	4.22	-20.0%	-17.4%
SCW	10,623	7.55	10,522	7.73	-1.0%	2.4%
OTHER	16,460	11.70	20,475	15.04	24.4%	28.5%
TOTAL	140,708	100.00	136,099	100.00	-3.3%	n/a

Province-wide Comparison

Figure 1.1 Province-wide comparison (by year and sector) of annual waste in metric tonnes, segregated into seven major categories.



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

2. Methodology

Waste generated in Nova Scotia is disposed of in seven landfills located across the province. An equal number of random ICI (Industrial, Commercial and Institutional) and Residential samples was taken from each of these landfills. (i.e. 84 samples: 12 from each site, made up of six Residential and six ICI)



Figure 2.1 Seven Landfill Locations in Nova Scotia

The sampling schedule for the seven landfills was designed to ensure a maximum and uniform number of Residential and ICI samples within a prescribed 14-week period. Sampling was scheduled as randomly as possible, limited only by each site's hours of operation, and a Monday through Friday work week. The schedule is attached as **Appendix B**.

Using a cube van, trained personnel visited each of the landfill/transfer station sites to collect samples. Random sample selection and handling at the sites conformed with the [Recommended Waste Characterization Methodology for Direct Waste Analysis Studies in Canada¹](#) – a report prepared for the Canadian Council of Ministers of the Environment in 1999 by SENES Consultants Limited.

At each of the landfills, samples were drawn from loads that had been dumped and segregated for audit purposes at the site. Each sample collected was a minimum of 135 kilograms for Residential and 200 kilograms for ICI. The sample was loaded into the collection truck, and kept identifiable and separate from other samples through the use of tarps and labeling in the truck compartment. As each sample was loaded, the technician started a standard chain of custody form. A data form with the following information was also completed for each load: Site name, sector category of sample, time of sampling, site conditions, waste haulage vehicle characteristics (plus tare and loaded weights, if available, or observation of weight), sample weight as recorded on site, and any unusual matters.

¹ Report downloadable at: http://www.ccme.ca/files/Resources/waste/packaging/pn_1497_waste_char.rpt_final_e.pdf

To optimize efficiency and reduce transportation costs, physical storage and sorting of the samples was conducted at a single centrally-located facility. Personnel at the facility, equipped with appropriate protective equipment, sorted material into categories as set out in the RRFB Nova Scotia's Waste Audit Manual. (See **Appendix A** for the Sort/Categorization Guide)

At the central facility, personnel placed the sample loads in individual bunkers built for this purpose, and labeled each bunker with the sample's identity. Sorting would begin by moving a sample out of its bunker onto the floor. The materials were then sorted directly from the floor or on sorting tables into the prescribed categories. Staff methodically sorted the items into clear bags and buckets. They were aided by a master categorization chart and labeling on bag racks so as to consistently follow the categorization required. When the sorting and weighing of a sample was completed, the next sample was processed.

The full list of 169 subcategories was divided into 18 major groups as follows:

Fibre	Glass	Special Care Waste (SCW)
Organics	Metal	Redeemable Containers
Diary Containers	Municipal Hazardous and Special Waste (MHSW)	Regulated Paint
Non-dairy Containers	Textiles	Regulated Tires
Plastic	Construction and Demolition (C&D)	Off-road Tires
Disposable Cups	Bulky Items	Regulated Electronics

3. Results

NOTE: The following section involves statistical analysis. For information helpful in interpreting the results described here, please see Section 3.2.

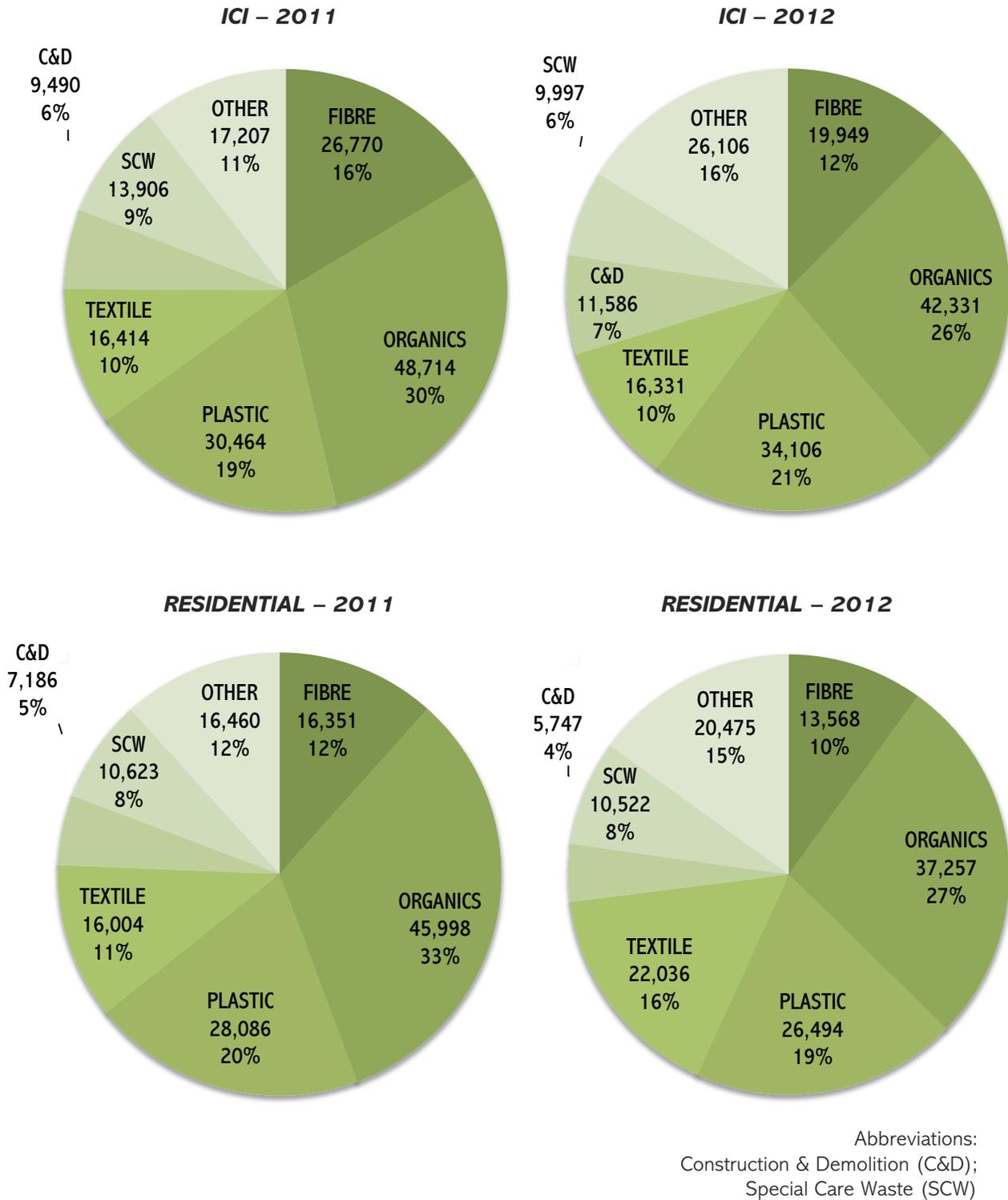
3.1 Overall Waste Audit Data Presentation

Data derived from sorting and weighing waste samples were recorded in a spreadsheet. The data were segregated into ICI and Residential, and source landfill site/transfer station. Sorted weights for each of the 18 major waste categories used in this audit were tallied and represented as percentages. (See **Appendix A** for the full list of categories and sub-groups)

The following pie charts show the percentage composition of the 18 major categories across year (2011 & 2012), both province-wide and at each of the seven landfills. The top six categories are labeled separately and the remaining 12 categories are grouped under "Other." Bar charts of major waste categories (by year and landfill location) are shown in Sections 3.2.1 and 3.2.2.

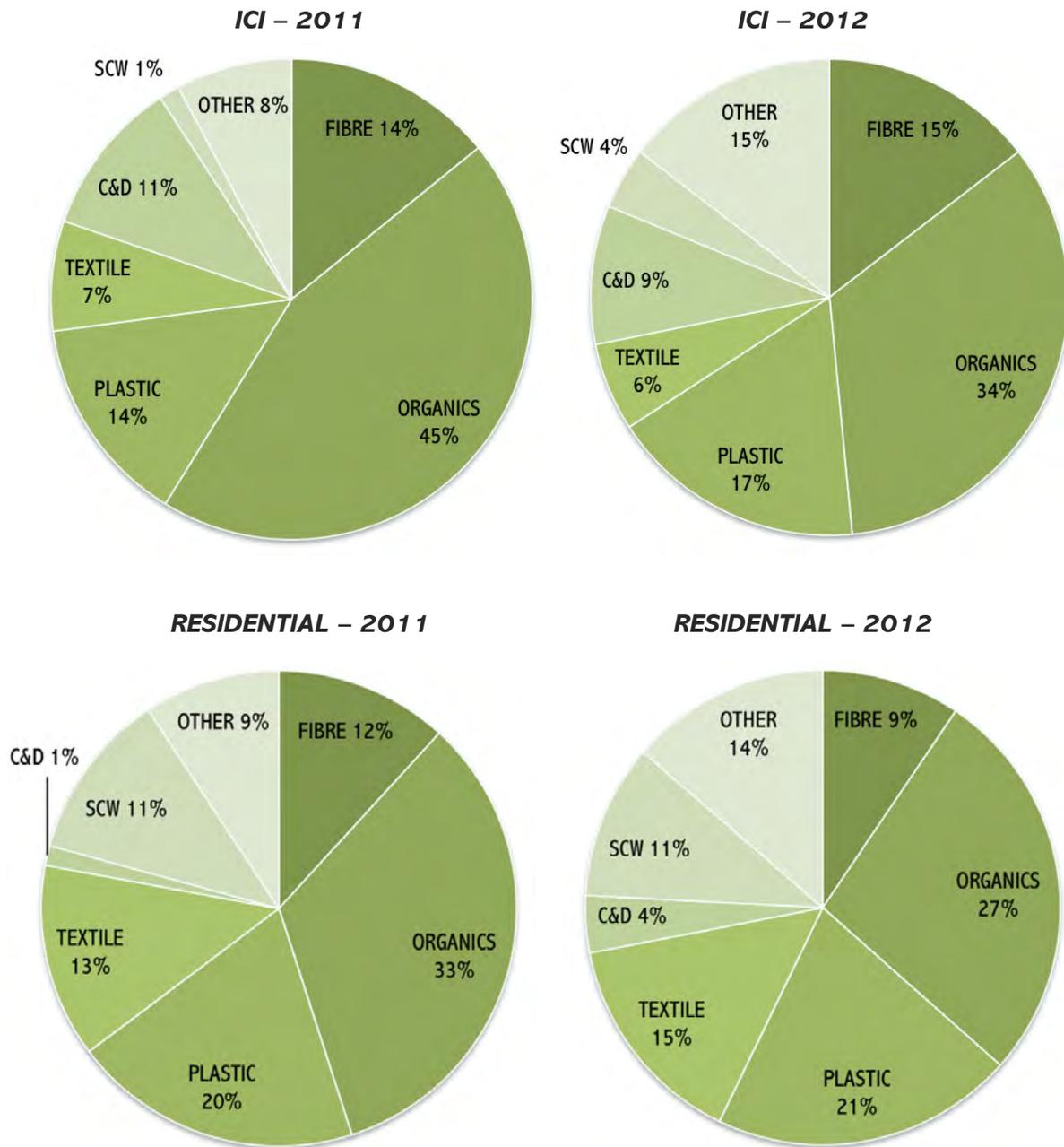
Province-wide Comparison

Figure 3.1 Province-wide comparison (by year and sector) showing annual waste in metric tonnes and percentage composition segregated into seven major categories.



Colchester

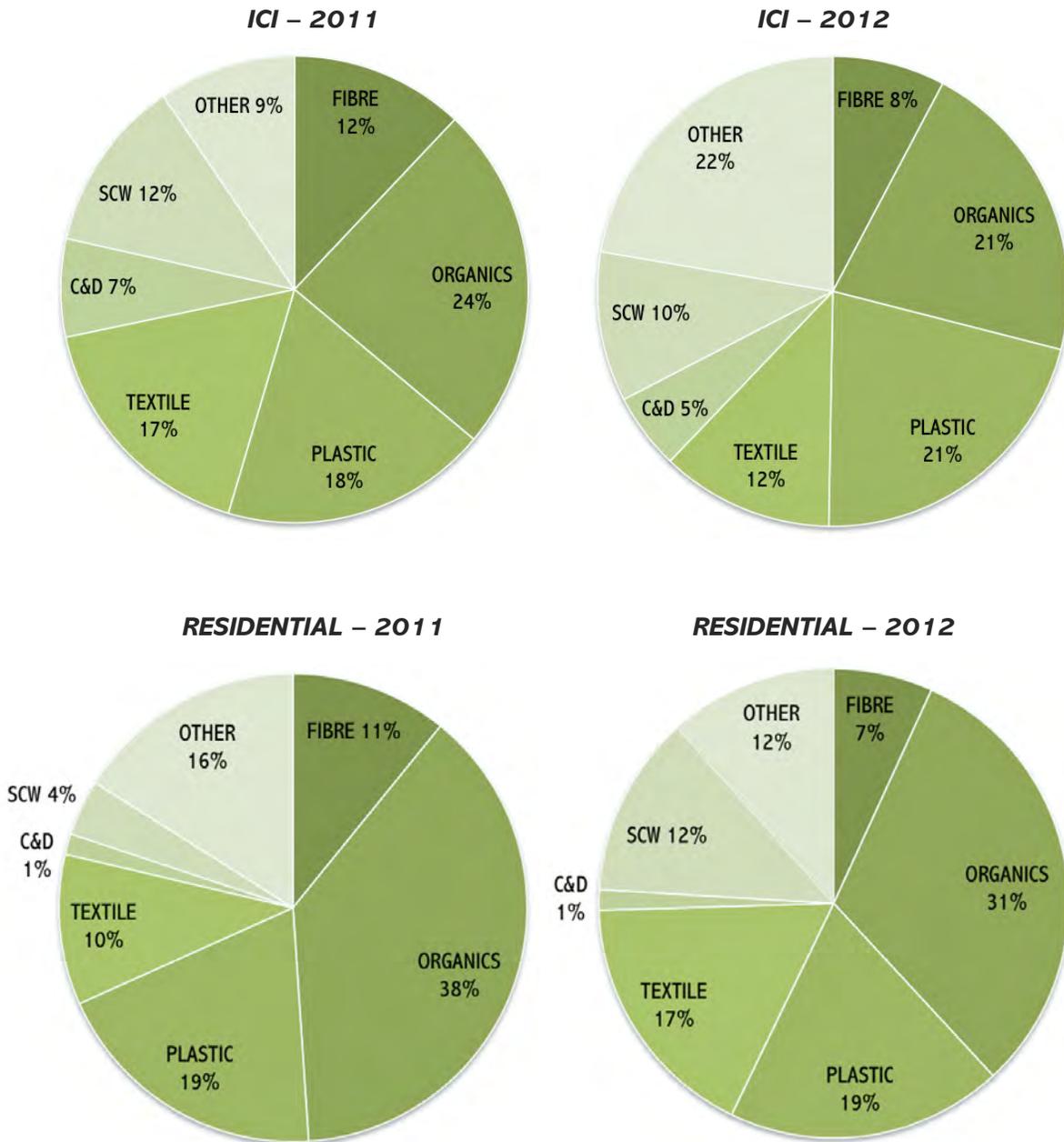
Figure 3.2 Percentage composition of waste (by sector and year) segregated into seven major categories (Colchester)



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

Cumberland

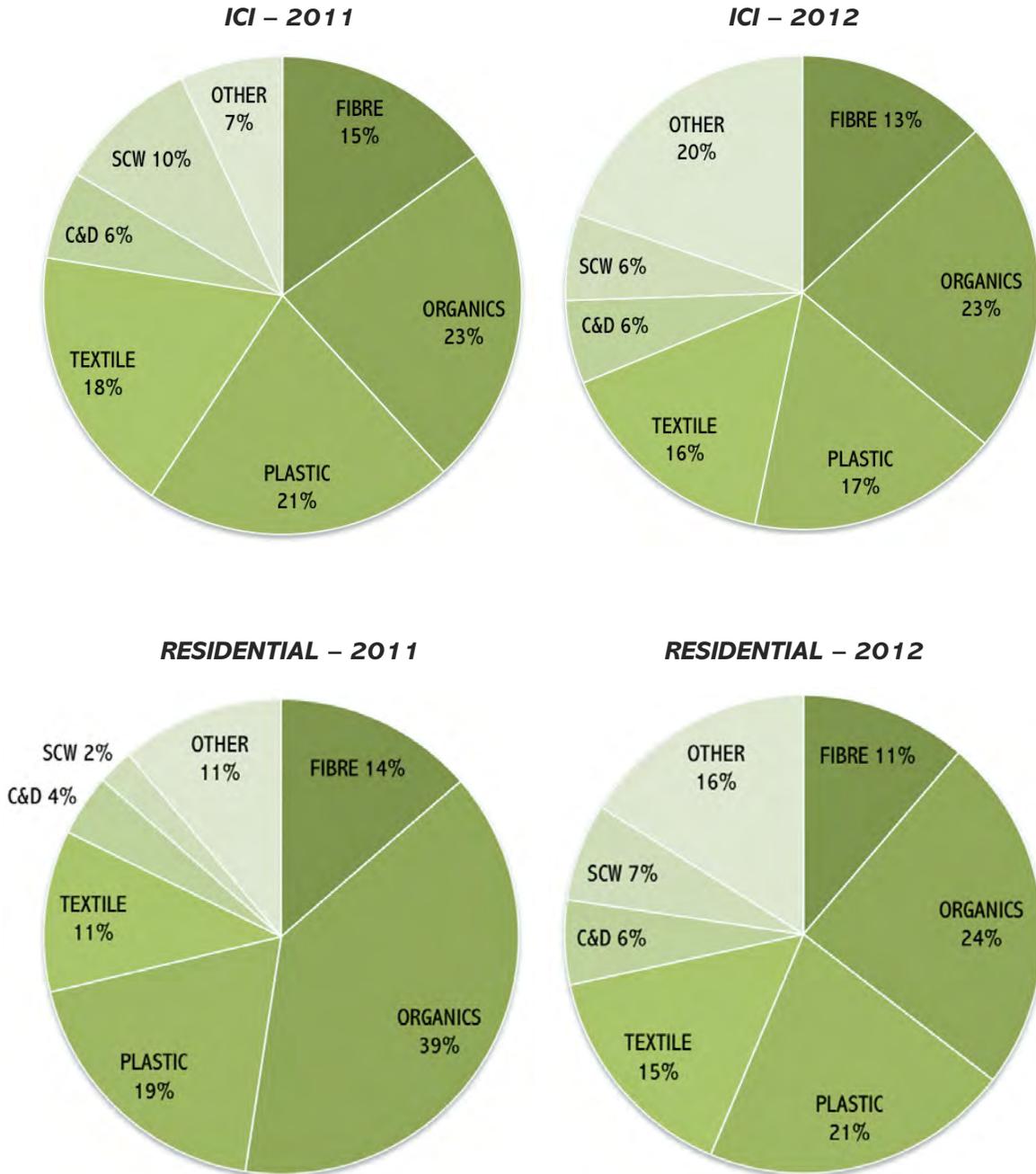
Figure 3.3 Percentage composition of waste (by sector and year) segregated into seven major categories (Cumberland)



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

Guysborough

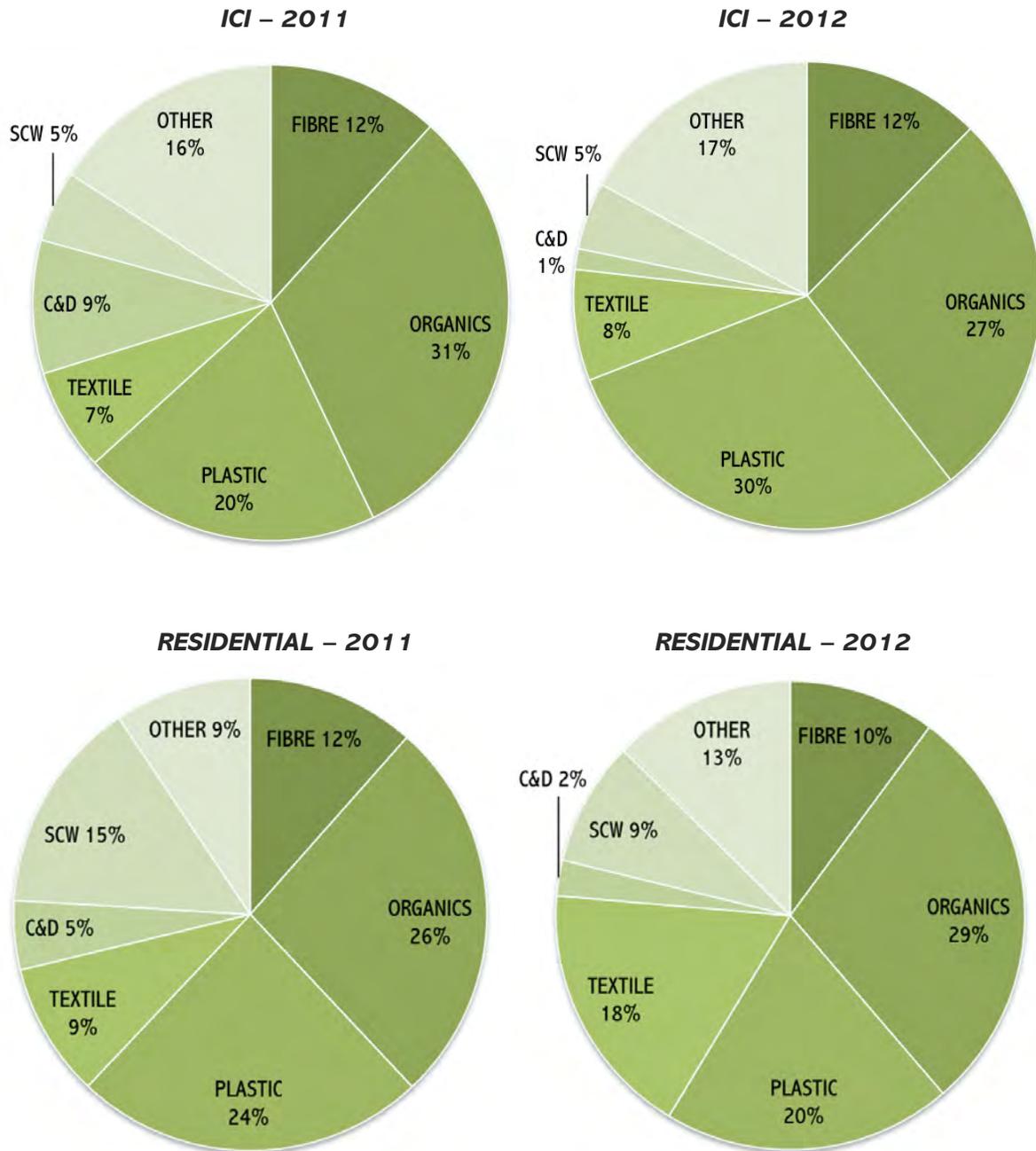
Figure 3.4 Percentage composition of waste (by sector and year) segregated into seven major categories (Guysborough)



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

Kaiser Meadow, Chester

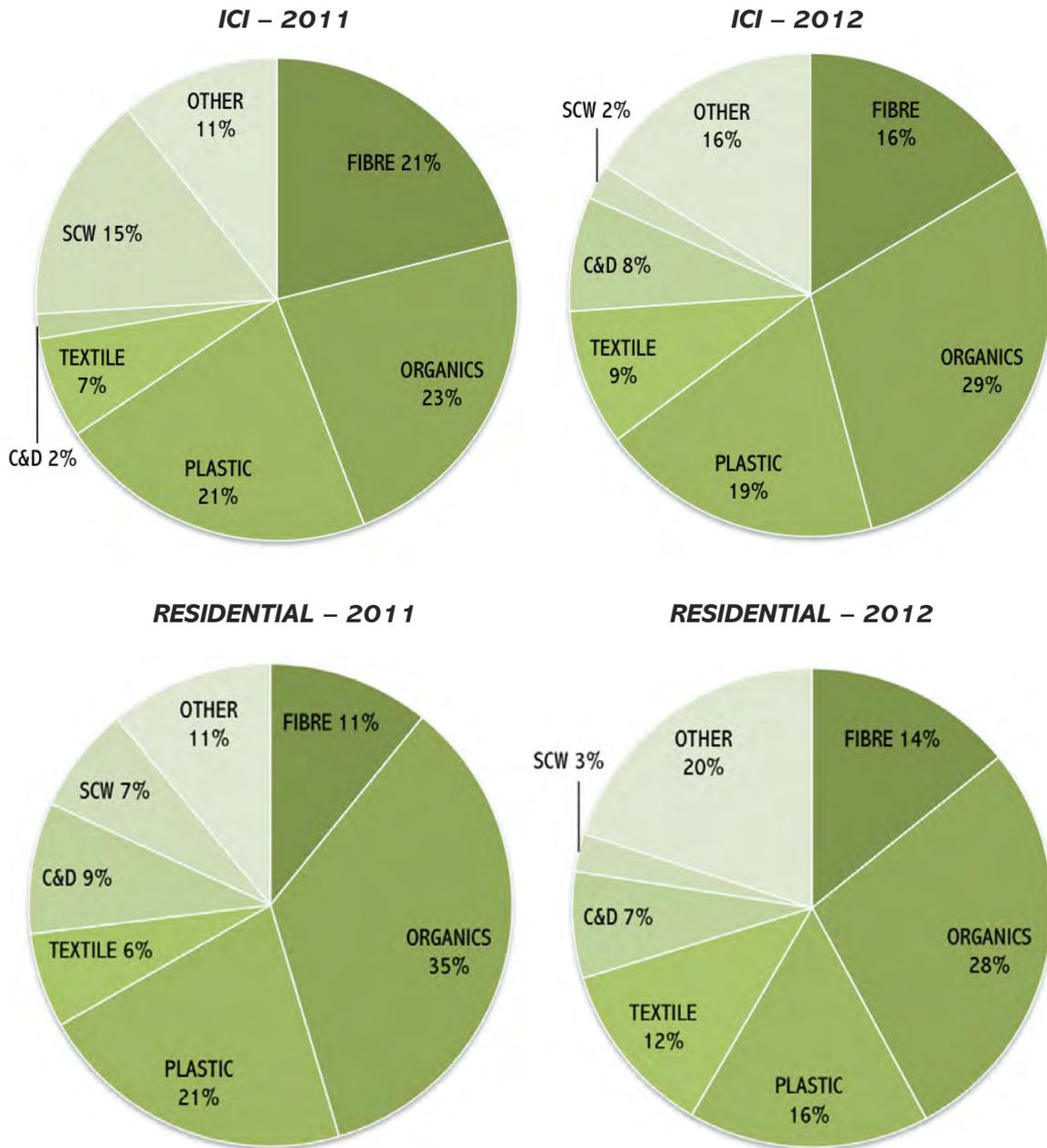
Figure 3.5 Percentage composition of waste (by sector and year) segregated into seven major categories (Kaiser Meadow)



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

Otter Lake, Halifax

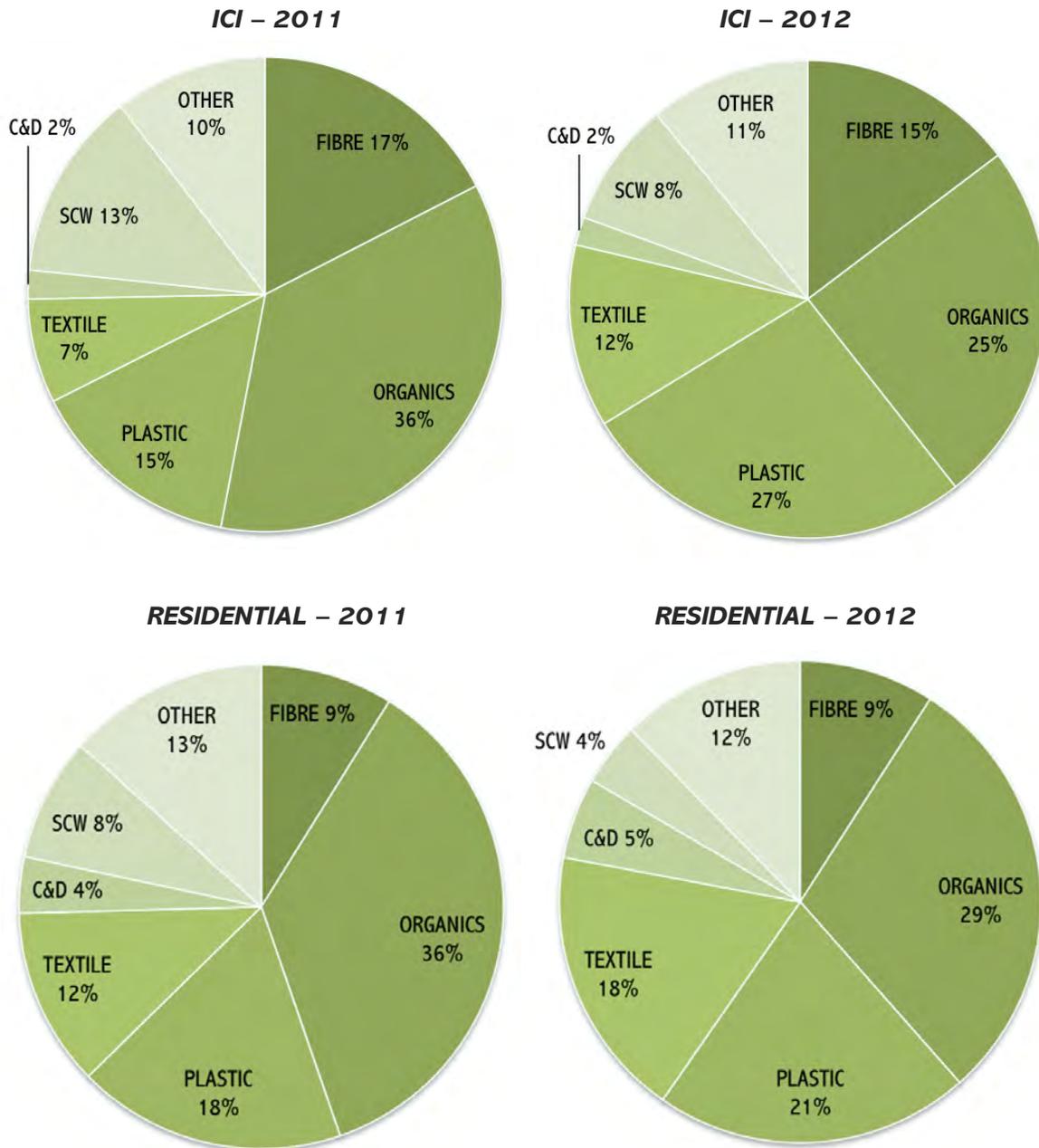
Figure 3.6 Percentage composition of waste (by sector and year) segregated into seven major categories (Otter Lake)



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

Queens

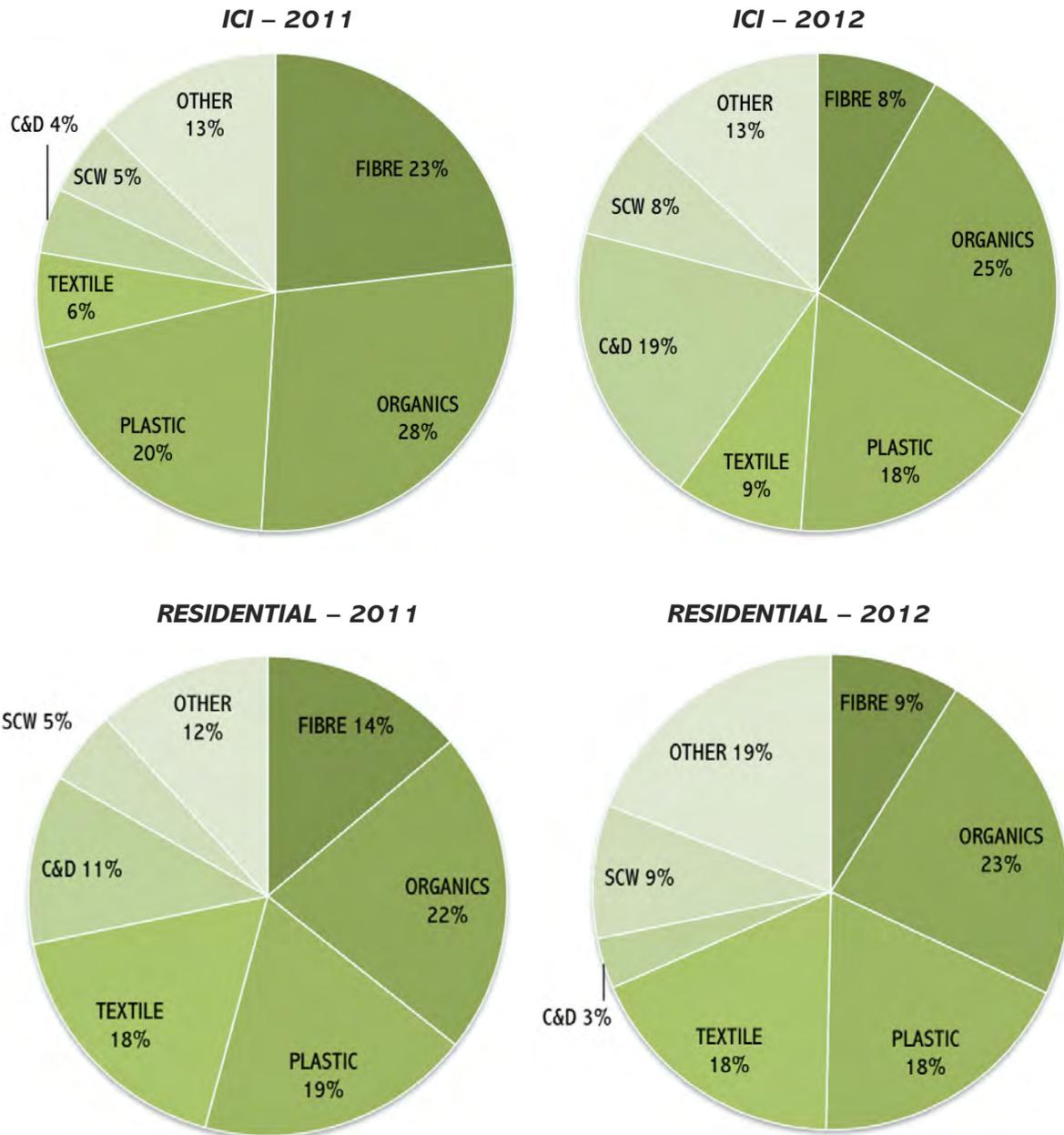
Figure 3.7 Percentage composition of waste (by sector and year) segregated into seven major categories (Queens)



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

West Hants

Figure 3.8 Percentage composition of waste (by sector and year) segregated into seven major categories (West Hants)



Abbreviations:
Construction & Demolition (C&D);
Special Care Waste (SCW)

3.2 Data Comparison between 2011 and 2012

Data from the waste audit were analyzed as a 2 x 7 factorial design with six replicates. The factors were **Year** with two levels (2011 & 2012) and **Landfill** with seven levels (Colchester, Cumberland, Guysborough, Kaizer Meadow, Otter Lake, Queens and West Hants). The data were segregated into **ICI** and **Residential**, and the 18 broad categories were considered as 18 different responses for analysis. The analysis of variance (ANOVA) was completed using the mixed procedure of statistical analysis system (SAS). Model assumptions like constant variance and normal distribution were verified with different methods available on Minitab (statistical software package).

The **effect** of each factor can be defined as the change in response when factors change from one level to another (e.g. a change from 2011 to 2012, or from Colchester to other landfills, etc.). An **interaction** is the variation among the differences between the means (averages) of responses for different levels of one factor over different levels of the other factor (e.g. an increase of % fibre in Colchester and a decrease in % fibre in Cumberland from 2011 to 2012). For significant effects, starting from the highest order interaction, the least square means were compared and letter groupings were generated.

Tables 3.1 and 3.2

P-values (calculated probabilities) for testing the main and interaction effect of 18 categories for ICI and Residential are shown in Tables 3.1 and 3.2. Significant effects at 5% level of significance are indicated with * and marginally significant effects at 10% level of significance are indicated with **.

Note: Level of significance is a probability. To say the given level is “significant at 5% level of significance” means that some class of event has a probability 0.05 of occurring. Likewise, 10% level of significance means that the event has a probability 0.10.

A 10% level of significance was used for generating letter groupings for the means of treatment combinations from two-factor interaction. A 5% level of significance was used when letter grouping was done for main effects, when interaction effect was not significant.

Table 3.1 Industrial, Commercial and Institutional (ICI) - P-values for main and interaction effects

RESPONSES	YEAR	LANDFILL	YEAR X LANDFILL
Fibre	0.23	0.10	0.82
Organics	<0.01*	0.01*	0.64
Dairy	0.69	0.28	0.76
Non-Dairy	0.19	0.59	0.75
Plastics	0.05	0.23	0.02*
Disposable Cups	0.60	0.14	0.11
Glass	<0.01*	0.77	0.16
Metals	0.08**	0.06**	0.21
MHSW	0.55	0.76	0.13
Textiles	0.63	0.01**	0.37
C&D	0.77	0.18	1.00
Bulky Items	0.12	0.17	0.15
SCW	0.54	0.15	0.80
Redeemable Containers	0.37	0.13	0.06**
Regulated Paint	0.83	0.53	0.21
Regulated Tires	0.42	0.49	0.34
Off Road Tires	0.53	0.18	0.53
Regulated Electronics	<0.01*	0.21	0.60

Table 3.2 Residential – P-values for main and interaction effect

RESPONSES	YEAR	LANDFILL	YEAR X LANDFILL
Fibre	0.09**	0.14	0.67
Organics	0.01*	0.73	0.69
Dairy	0.72	0.97	0.50
Non-Dairy	0.37	0.36	0.50
Plastics	0.44	0.98	0.92
Disposable Cups	0.66	0.50	0.71
Glass	0.57	0.23	0.02*
Metals	0.24	0.35	0.06**
MHSW	0.39	0.51	0.64
Textiles	0.02*	0.92	0.79
C&D	0.29	0.21	0.92
Bulky Items	0.45	0.66	0.31
SCW	0.18	0.02	0.02*
Redeemable Containers	0.50	0.68	0.70
Regulated Paint	0.02	0.63	0.12
Regulated Tires	0.28	0.48	0.42
Off Road Tires	0.52	0.17	0.52
Regulated Electronics	<0.01*	0.3883	0.8448

3.2.1 Industrial, Commercial and Institutional (ICI) Sector

In this section, bar charts are shown for seven of the broad waste categories in which significant differences in ICI waste were revealed when comparing data by year and/or location.

i. Organics

Province-wide, the percentage of organics decreased by 11.7% from 2011 to 2012 (i.e. from 29.9% to 26.4%). Although Colchester also showed a decrease in the percentage of organics (from 44.6% in 2011 to 33.9% in 2012), its average percentage of organics over the two years was higher than at other landfills.

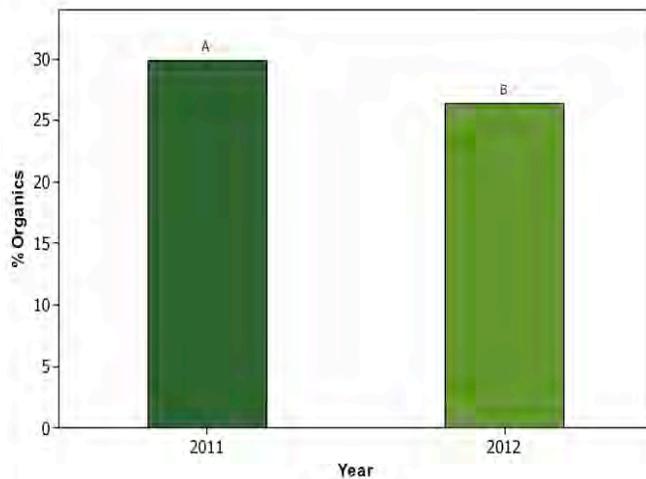


Figure 3.9 Province-wide Mean Percentage of Organics (ICI) in 2011 and 2012
(Note: Means having the same letter are not significantly different)

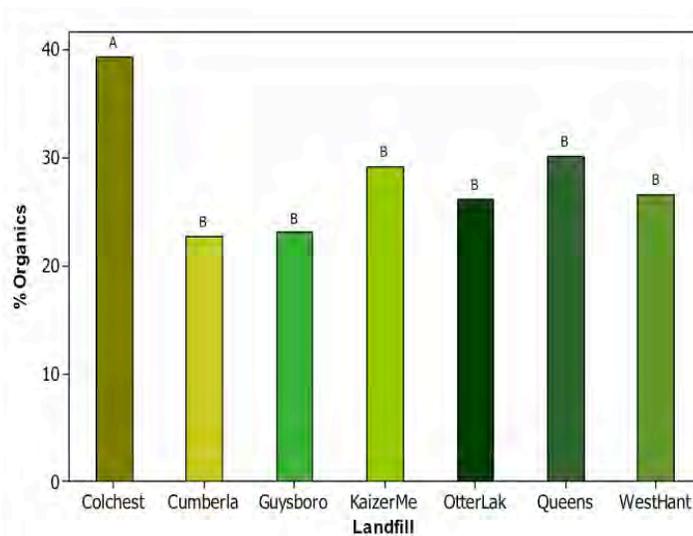


Figure 3.10 2011/2012 Mean Percentage of Organics (ICI) in each of the seven landfills
(Note: Means having the same letter are not significantly different)

ii. Plastics

Percentage of plastics significantly increased in Kaiser Meadow from 2011 (20.3%) to 2012 (29.7%). Likewise Queens landfill percentage of plastics increased by 84% from 2011 to 2012. (i.e. from 14.6% to 26.9%) There was a decrease in Guysborough, Otter Lake and West Hants landfills, however the percentage decreases were not significant.

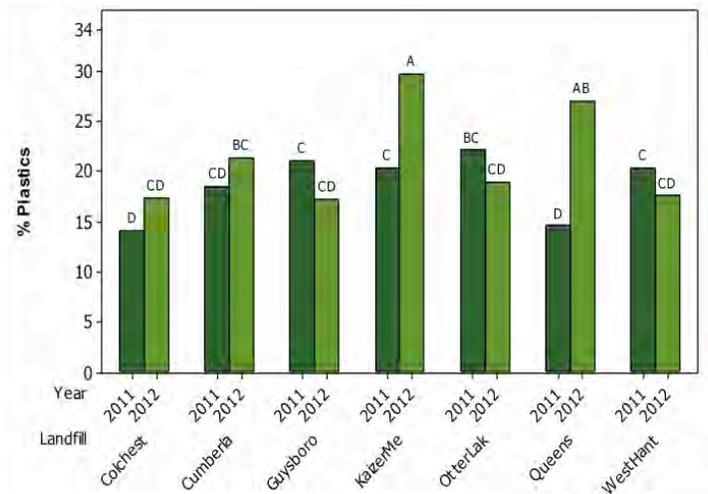


Figure 3.11 Mean Percentage of Plastics (ICI) in each of the seven landfills in 2011 and 2012
(Note: Means having the same letter are not significantly different)

iii. Glass

Province-wide, the percentage of glass increased from 0.5% in 2011 to 1.6% in 2012. There were no significant differences observed between the individual landfills.

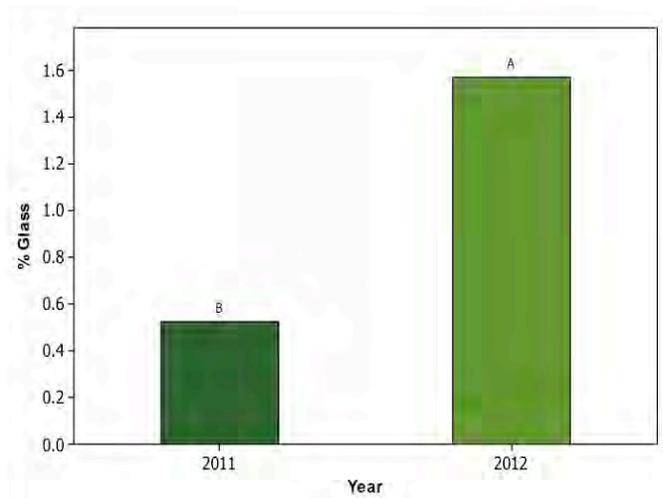


Figure 3.12 Province-wide Mean Percentage of Glass (ICI) in 2011 and 2012
(Note: Means having the same letter are not significantly different)

iv. Metals

Province-wide, the percentage of metals increased by 78% from 2011 to 2012 (i.e. 2.8% in 2011 to 5.0% in 2012). Cumberland County landfill received a 2011/2012 average of 8.2% metals, which was significantly higher than all other landfills.

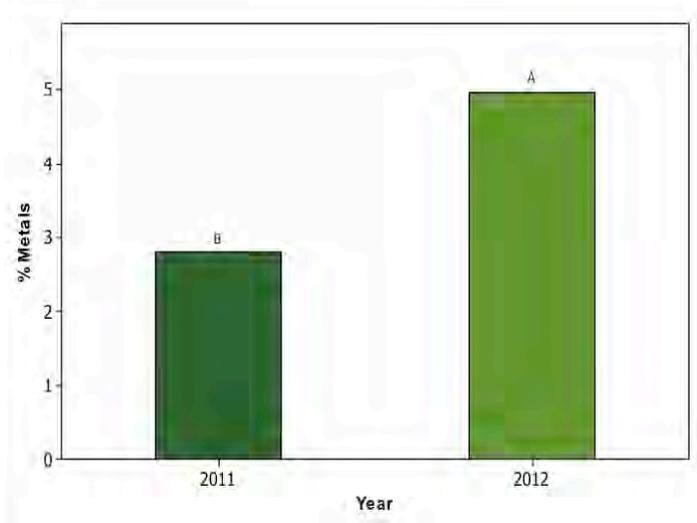


Figure 3.13 Province-wide Mean Percentage of Metals (ICI) in 2011 and 2012
(Note: Means having the same letter are not significantly different)

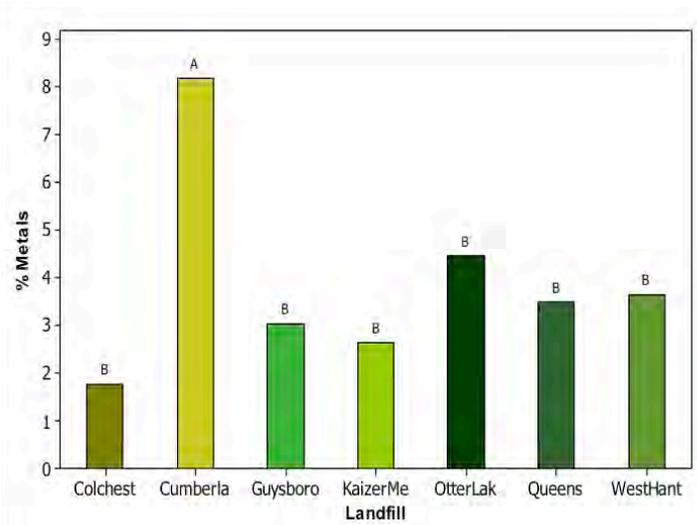


Figure 3.14 2011/2012 Mean Percentage of Metals (ICI) in each of the seven landfills
(Note: Means having the same letter are not significantly different)

v. Textiles

The 2011/2012 average percentage of textiles was significantly higher in Guysborough (16.9%) and Cumberland (14.5%) than at the other landfills. There was no significant difference found between the other landfills.

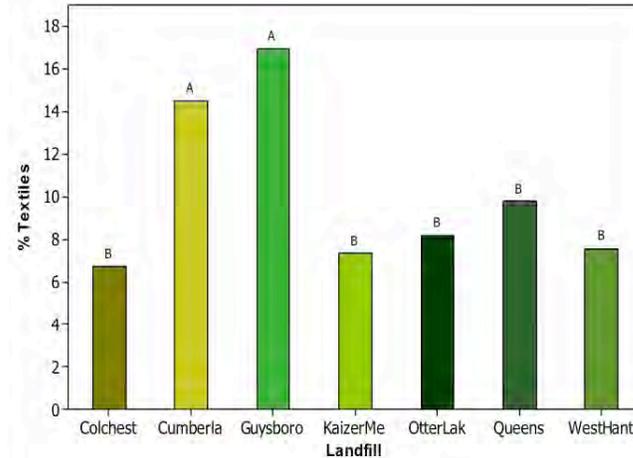


Figure 3.15 2011/2012 Mean Percentage of Textiles (ICI) in each of the seven landfills
(Note: Means having the same letter are not significantly different)

vi. Redeemable Containers

The interaction effect for redeemable containers was marginally significant. Colchester landfill was the only landfill where the percentage of redeemable containers increased by 116% from 2011 to 2012. From Figure 3.16 it can be seen that Guysborough landfill also had an increase. There was a decrease in all other landfills between 2011 and 2012, but these differences were not significant.

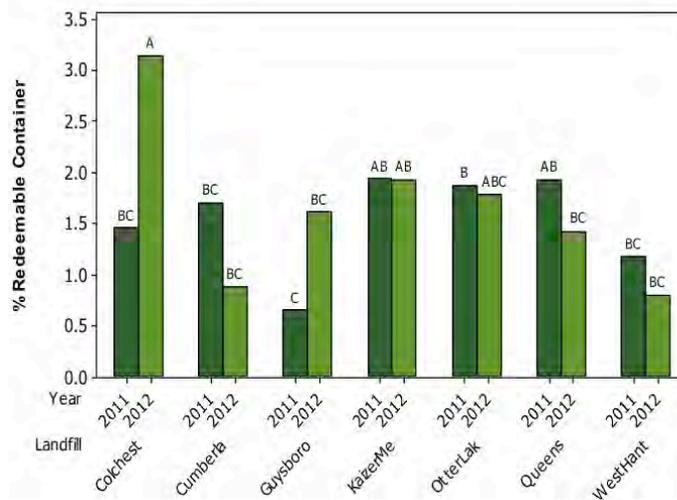


Figure 3.16 Mean Percentage of Redeemable Containers (ICI) in each of the seven landfills in 2011 and 2012 (Note: Means having the same letter are not significantly different)

vii. Regulated Electronics

Province-wide, there was a six-fold increase in percentage of regulated electronics from 2011 to 2012. (i.e. 0.3% in 2011 and 2.0% in 2012). There were no significant differences observed between individual landfills.

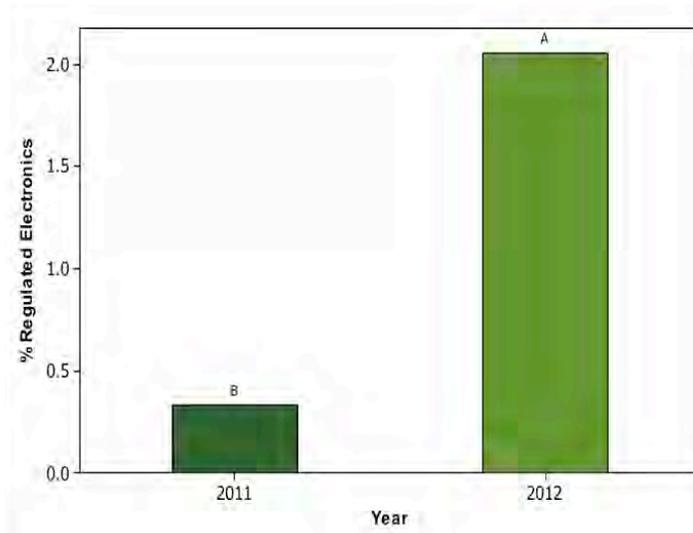


Figure 3.17 Province-wide Mean Percentage of Regulated Electronics (ICI) in 2011 and 2012
(Note: Means having the same letter are not significantly different)

3.2.2 Residential Sector

In this section, bar charts are shown for seven of the broad waste categories in which significant differences in Residential waste were revealed when comparing data by year and/or location.

i. Fibre

Percentage of fibre decreased by 14.2% from 2011 to 2012 overall. There were no significant difference between the landfills.

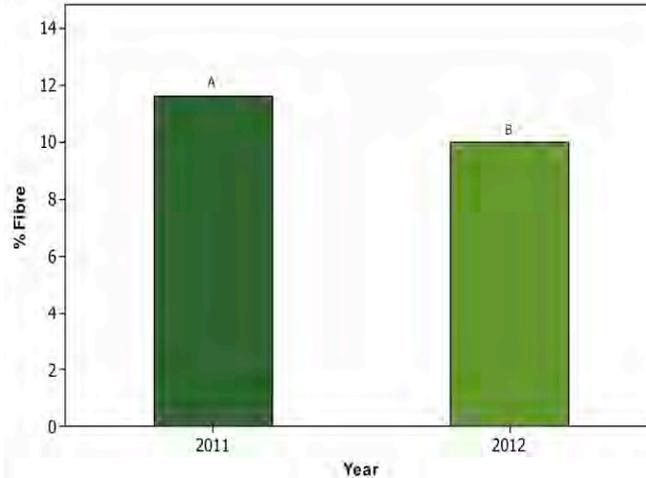


Figure 3.18 Province-wide Mean Percentage of Fibre (Residential) in 2011 and 2012
(Note: Means having the same letter are not significantly different)

ii. Organics

Percentage of organics decreased from 32.7% in 2011 to 27.4% in 2012. Unlike ICI (see Figure 3.10), in Residential waste there were no significant differences between the landfills.

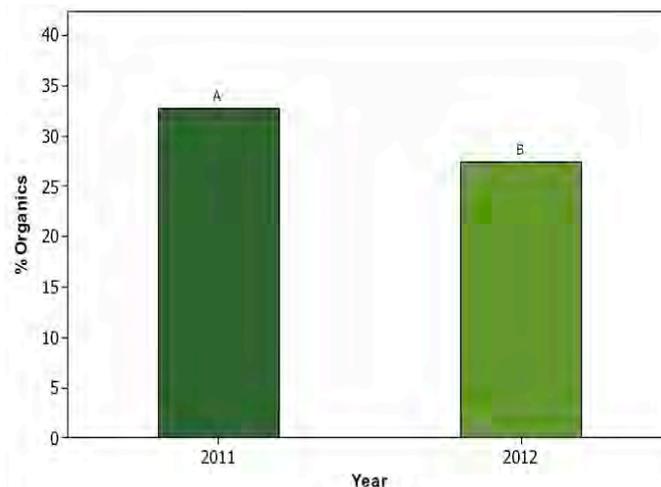


Figure 3.19 Province-wide Mean Percentage of Organics (Residential) in 2011 and 2012
(Note: Means having the same letter are not significantly different)

iii. Glass

Percentage of glass in Cumberland landfill decreased from 3.9% in 2011 to 1.3% in 2012. Whereas, in Kaiser Meadow and West Hants the percentage of glass increased from 0.8% to 2.3% and 0.8% to 2.5% respectively.

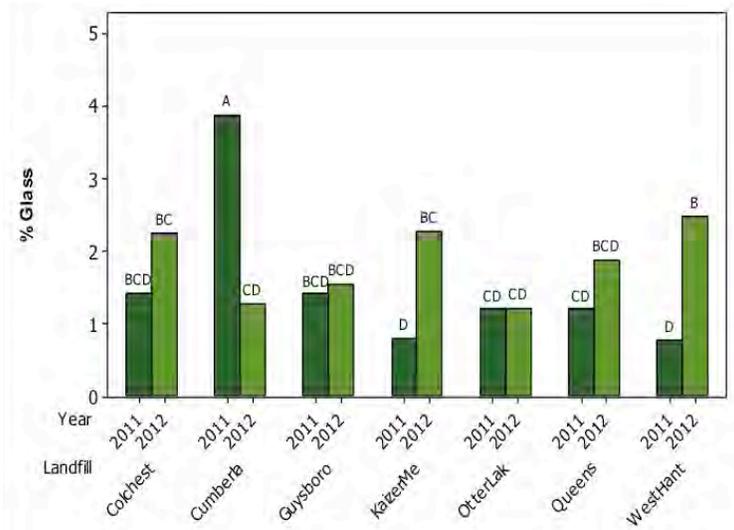


Figure 3.20 Mean Percentage of Glass (Residential) in each of the seven landfills in 2011 and 2012 (Note: Means having the same letter are not significantly different)

iv. Metals

The interaction effect is significant for percentage of metals. In Otter Lake and West Hants the percentage of metals increased by 105% and 92% from 2011 to 2012, respectively. However, in Queens it decreased by 142% from 2011 to 2012.

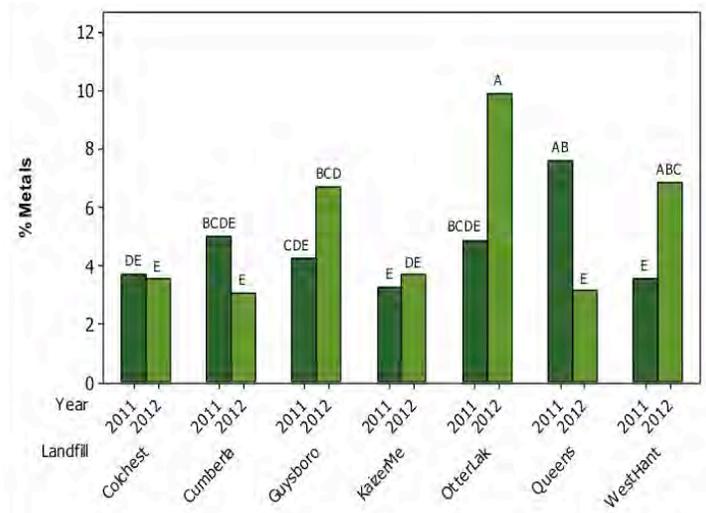


Figure 3.21 Mean Percentage of Metals (Residential) in each of the seven landfills in 2011 and 2012 (Note: Means having the same letter are not significantly different)

v. Textiles

Province-wide, the percentage of textiles increased by 42.4% from 2011 to 2012. There were no significant differences between individual landfills.

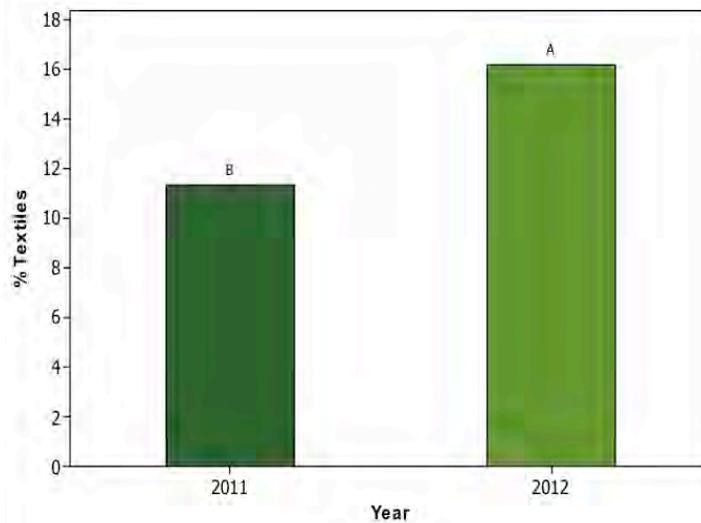


Figure 3.22 Province-wide Mean Percentage of Textiles (Residential) in 2011 and 2012
(Note: Means having the same letter are not significantly different)

vi. Special Care Waste

In 2012 the percentage of Special Care Waste (SCW) at the Cumberland landfill increased to 12.5% (from 3.9% in 2011). The percentage difference between 2011 and 2012 at the other landfills was not significant.

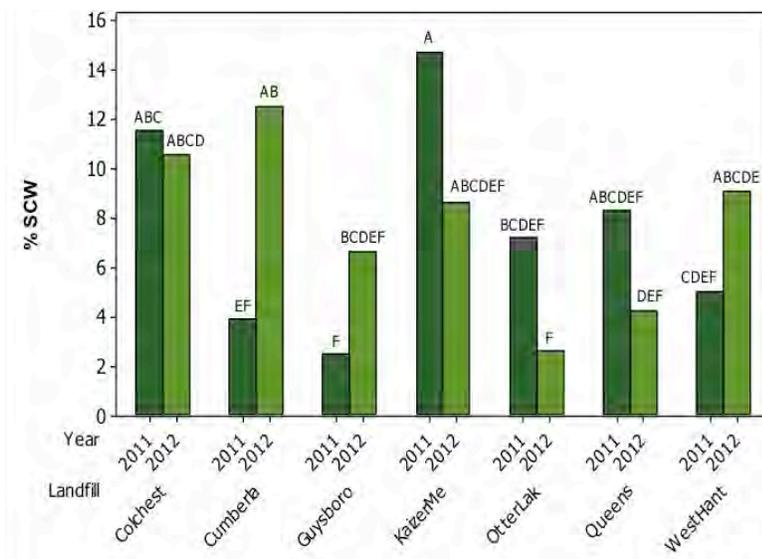


Figure 3.23 Mean Percentage of SCW (Residential) in each of the seven landfills in 2011 and 2012
(Note: Means having the same letter are not significantly different)

vii. Regulated Electronics

Province-wide, the percentage of regulated electronics increased by 417% from 2011 to 2012. In 2011 regulated electronics accounted for 0.6% of material in samples and in 2012 it was just under 2.9%.

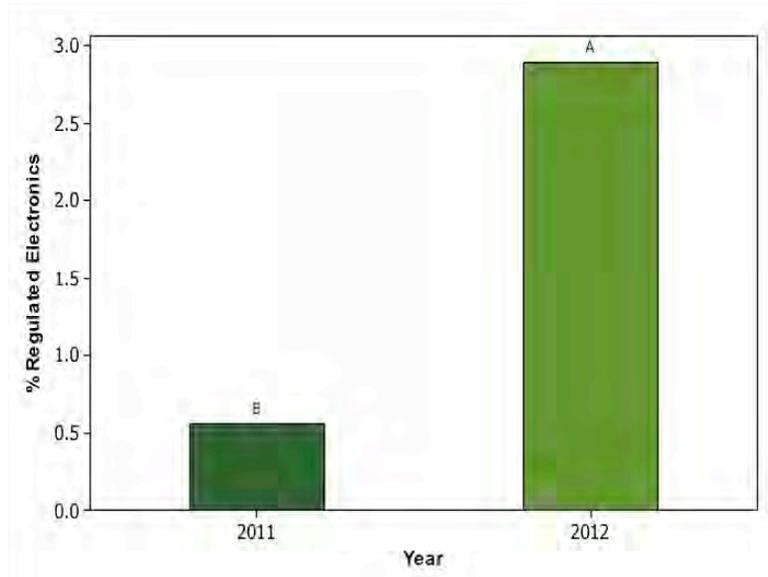


Figure 3.24 Province-wide Mean Percentage of Regulated Electronics (Residential) in 2011 and 2012 (Note: Means having the same letter are not significantly different)

4. Observations and Recommendations

The results from data analysis of the 2011 and 2012 waste audits were presented in the previous chapter. In this chapter, key observations and recommendations based on the compiled data are presented.

4.1 Observations

Residential — There was a noticeable difference in the composition of waste found in clear bags versus opaque garbage bags. Residential waste in clear bags tended to have fewer redeemable containers and less organic waste. For organics, this observation complied with audit results, where the percentage of organics decreased by an absolute value of 16.2% from 2011 to 2012. However, there was no significant difference found between 2011 & 2012 with the percentage of redeemable containers. (The exception was Colchester, where the percentage of redeemable containers increased between 2011 and 2012 audit data).

ICI — There were several samples that contained waste from large scale events (e.g. music festivals). This waste was consistently found in opaque bags and normally contained a fairly high number of redeemable beverage containers. There was also a lot of organic waste from restaurants.

Seasonal Factors — The timing of audits may affect results. The waste audit in 2011 was performed from March through the end of June. In 2012 it was performed from June through August. Significant differences between the landfill samples from 2011 and 2012 may be due to some seasonal variations in waste disposal patterns. However, the influence of the seasonal variation cannot be verified with only these two sets of audit data.

Common Materials — Several items were extremely common in waste samples. These are listed below, followed by their “material sub-category number.” (A complete listing of subcategories is found in **Appendix A.**)

- Disposable fibre cups (60)
- Expanded polystyrene (47)
- Diapers (133)
- Tissue paper (22)
- Animal waste and cat litter (24b)

The disposable fibre cups and expanded polystyrene both took a fair amount of space in the bags, but due to their lightweight components, often contributed minimally to the weight of a given sample. Diapers greatly contributed to the weights of samples. Animal waste and cat litter (24b) appeared in the majority of the samples. Cat litter in particular held substantial weight.

New Sub-Categories — Personnel introduced several new sub-categories during the 2012 study:

- “Animal Waste” as an additional “Other” line item under Organics
- “Other” under C&D for items like caulking tubes
- “Rubber Miscellaneous” under Regulated Tires
- “Residual Waste” (non-specific) for material on the table/floor too small to effectively sort

Allocation Where Sub-Category was Unclear — Some materials had no clear category, so were dealt with in the following ways:

- Wax was placed in Organics (21)
- Animal waste and cat litter was categorized under Organics (24b)
- Pizza boxes were classed as Corrugated Cardboard (14)
- Saran Wrap and similar clear food film wrap was categorized as Plastic (either 44 or 53)
- K-Cups were very common, especially in ICI samples. During this audit, personnel emptied the contents into Organic (21) and placed the cup in Plastic (49)
- Ceramics were also quite common and were placed with Glass (70)

There was some difficulty distinguishing LDPE clear plastic wrap from PVC clear plastic wrap during the sorting process. Much of what was determined to be either PVC or LDPE was arbitrarily categorized as either 44 (PVC 3) or 53 (LDPE 4).

Cooperation and Interest at Facilities — Scale operators and facility managers were all very helpful during the audit, showing both an interest in the audit process and in improving waste management practices overall.

4.2 Recommendations

Clear Bag Policies — Based on the noticeable difference in waste found in clear versus opaque bags, implementing and strictly enforcing a clear bag policy across Nova Scotia should greatly reduce the amount of organics and other already banned materials entering landfills undetected.

Sub-Categories — During the 2012 waste audit several items did not have clearly identifiable categories. For future audits, the Sort/Categorization Guide (see **Appendix A**) should be reviewed to accommodate these items:

- Rubber miscellaneous (separate from tires)
- Caulking tubes (C&D)
- Cement/concrete (C&D)
- Wall tiles (C&D)
- Plywood (C&D)
- K-cups/coffee pods

- Wax
- Wooden ornaments/items (coated and non-coated) (excluding C&D)
- Ceramics

New or Revised Categories — A few key guidelines should be developed to aid in determining whether it is more appropriate to dispose of used pizza boxes in green bins (Organics 21) or as Corrugated Cardboard (Fibre 14). The category for Saran Wrap-type film should be clarified (Plastic 44 or 53). There should be a new category for small household wooden items that fall outside C & D. This would include items like ornaments, baskets, Popsicle sticks, etc. A further subcategory of treated and untreated wood items could be defined. Cat litter (24b) was very common in samples. The viability of diverting cat litter in some capacity could be considered in future, as part of overall waste management.

Staffing — Three staff were originally assigned to the audit. It took some time for staff to achieve a good pace during sample sorting; with so many categories, there was a risk of getting overwhelmed at times, given the strict 14-week audit period and required number of samples. A significant increase in pace was achieved when staffing increased from three people to four part-way through the audit.

Segregated Sample Piles at Waste Management Facilities — Facility managers were given a schedule of the audit visits. If space permitted, site staff set aside a pile of Residential and a pile of ICI waste for audit staff to collect from on the sample collection days. This practice saved time gathering the sample load at a site.

Sample Scale — Mid-audit, staff changed from a 25 kg scale to a 100 kg “large game scale.” This change allowed for more efficient loading of the truck.

Appendix A

2012 Waste Audit - Sort/Categorization Guide

MATERIAL CATEGORY	SUB-CATEGORY		SEPARATION OF SUB-CATEGORIES
FIBRE	Uncoated Paper - newsprint quality	1	Dailies
		2	Weeklies
		3	Magazines - uncoated
		4	Flyers/inserts - uncoated
		5	Telephone Books/Yellow Pages
	Coated Paper - catalogue quality	6	Magazines - glossy
		7	Catalogues/Calendars
		8	Flyers/inserts - glossy
	Books	9	Hard cover
		10	Soft cover
	Mixed Fines	11	None
	Other	12	Specialized purpose
	Packaging	13	Boxboard cardboard - single layer
		14	Corrugated cardboard - multi layer - dry
		15	Waxed corrugated cardboard - multi-layer
		16	Fast-food boxboard
		17	Fast-food wrap
		18	Molded Pulp
		19	Kraft paper bags/wrap
		20	Laminated paper bags/boxboard
ORGANICS	Food Waste	21	Home/ICI food waste not in containers (see 24)
	Tissue	22	Tissue-facial, toilet, food clean-up, and gift wrapping
	Yard Waste	23	Home/ICI gardening waste and aggregate
	Other	24	Containerized food
		24b	Animal waste
	Fibre	25	Wet paper and cardboard
DAIRY	Beverage - Dairy milk only	26	Polycoat (gable top) - 1 litre and greater
		27	Polycoat (gable top) - less than 1 litre
		28	Plastic jug (HDPE - Number 2) - 1 litre and greater
		29	Plastic jug (HDPE - Number 2) - less than 1 litre

	Ice Cream	30	Tetra pak
		31	Plastic bag (LDPE film - Number 4)
		32	Plastic container (HDPE - Number 2)
	Other Dairy	33	Boxboard container (with lining)
		34	Plastic container (HDPE - #2, PP - #5, PS - #6)
		35	Plastic container (other than 2, 5 and 6)
	36	Tetra pak	
Non-fluid Milk Product	37	Plastic film	

NON-DAIRY	Beverage - Non-Dairy alternatives	38	Polycoat (gable top)
		39	Plastic container
		40	Tetra pak
	Foodstuffs	41	Tetra pak

PLASTIC	Food and other container packaging	42	PET - Number 1
		43	HDPE - Number 2
		44	PVC - Number 3
		45	LDPE - Number 4
		46	PP - Number 5
		47	PS - Number 6
		48	Other - Number 7
		49	Non-numbered containers
	Composite packaging	50	
	Plastic Bags/Film	51	LDPE - Number 4
		52	LDPE - Number 4 - not suitable for recovery
		53	LDPE - Number 4 - Other bags, film packaging, wrap
		54	PP - Number 5 - Agriculture
	Non-packaging End-of-Life Products	55	Crates, pails and tubs
		56	Consumer goods
		57	Non-program electronic products/components
		58	Non-program paint products
		59	Non-Municipal Hazardous and Special Waste

DISPOSABLE CUPS	Fibre	60	Disposable cups - branded - hot
		61	Disposable cups - branded - cold
		62	Disposable cups - other
	Plastic	63	Single use - branded
		64	Single use - non-branded

GLASS	Food and Consumer Goods Packaging	65	Clear - food containers
		66	Coloured - food containers
		67	Clear - non-food containers
		68	Coloured - non-food containers
	Automotive	69	
Other Products	70		

METAL	Food and Consumer Goods Packaging	71	Aluminum food containers
		72	Aluminum - other
		73	Steel food containers
		74	Steel composite containers
		75	Steel - other
	Non-Paint Program Pressurized Containers	76	Aluminum
		77	Steel
	Non-Electronics Program items	78	Appliances - small
		79	Appliances - large
		80	Electronics - small
		81	Electronics - large
Other	82	Extension cords and wire of uncertain materials	

Municipal Hazardous and Special Waste (MHSW)	Pressurized gas containers	83	Non-refillable
		84	Re-fillable
	Marine flares	85	by symbol or container type
	Mercury containing products	86	by symbol or container type
	Batteries	87	Non-rechargeable
		88	Rechargeable
		89	Lithium-ion
	Sharps and Pharmaceuticals	90	None
	Pesticides and their containers	91	PCA regulated products
		92	Non-PCA regulated products
	Automotive fluid containers	93	HDPE - Number 2
		94	PP - Number 5
		95	Other
	Other fluids, fuel, lubricants & containers	96	HDPE - Number 2
		97	Other
	Solvents and containers	98	
Corrosives and containers	99		
(Crankshaft) oil filters	100		
Oily rags	101		

TEXTILES	Fabric	102	Clothing
		103	Household use
	Footwear	104	
	Other	105	

C&D	Wood	106	dimensional - clean
		107	dimensional - coated
		108	engineered/composite - clean
		109	engineered/composite - coated
		110	pressure-treated
	Wallboard and coverings	111	drywall - clean
		112	drywall - coated
	Shingles	113	asphalt
		114	other
	Flooring	115	carpet
		116	other
	Insulation	117	fibreglass
		118	foam (PS)
		119	other
	Glass	120	window/door
		121	decorative
	Countertops	122	laminate
123		slate/marble	
Ceiling Tile	124	None	
Other (Caulking)	171		

BULKY ITEMS	Furniture	125	mattresses - coil
		126	mattresses - foam
		127	mattresses - futon
		128	box spring
		129	upholstered - seating
		130	solid wood
		131	engineered/laminate wood
		132	other (non-plastic)

SPECIAL CARE WASTE	Diapers	133	
	Other	134	Medical/First Aid, toilet, feminine hygiene, cosmetics

REDEEMABLE CONTAINERS	Beverage	135	Sort 1 - Aluminum cans
		136	Sort 2 - Glass - clear
		137	Sort 3 - PET - clear
		138	Sort 4 - Glass -coloured
		139	Sort 5 - PET - green
		140	Sort 6 - Other plastic (3, 5, 6 &7)
		141	Sort 8 - Steel cans
		142	Sort 9 - Gable top
		143	Sort 10 - Tetra pak
		144	Sort 11 - HDPE - translucent
		145	Sort 13 - PET - blue
		146	Sort 21 - Glass - clear (over 500 ml)
		147	Sort 22 - Glass - coloured (over 500 ml)
		148	Sort 23 - Liquor PET - clear and coloured (over 500 ml)
		149	Sort 24 - Liquor PET - clear and coloured
150	Sort 25 - Liquor - other		
151	Sort 26 - Liquor - other (over 500 ml)		

REGULATED PAINT	Plastic	152	
	Metal	153	
	Aerosols	154	

REGULATED TIRES	Passenger and Light Truck	155	None
	Tractor Trailer	156	None
	Rubber Misc.	170	

OFF-ROAD TIRES	Non-Tire Program items	157	Small
		158	Large

REGULATED ELECTRONICS	Computers	159	Desktop
		160	Portable
	Computer Peripherals	161	
	Desktop Printers	162	
	Display Devices	163	
	Personal/Portable A/V Systems	164	
	Vehicle A/V Systems	165	
	Home Theatre in a Box	166	
	Home Audio/Video Systems	167	
	Non-cellular telephones	168	
	Cellular telephones	169	
	Residual Waste		

Appendix B

2012 Schedule of Sample Collections

Week	Date Range (Mon-Fri)	Monday	Tuesday	Wednesday	Thursday	Friday
1	28 May – 2 June	Colchester	Kaiser Meadow (At Lunenburg transfer station (2pm) & Kentville transfer station (9:15am))			Otter Lake
2	4 – 8 June		Queens (Clare Transfer Station)	Cumberland		West Hants (East Hants transfer station)
3	11 – 15 June		Colchester			Kaiser Meadow (Lawrencetown transfer station)
4	18 – 22 June		Guysborough (Sydney transfer station)		Otter Lake & Queens (landfill) (Res 1:30)	West Hants
5	25 – 29 June		Queens Landfill (ICI 1:30)	Colchester	Guysborough (landfill)	
6	2 – 6 July	(Canada Day)			Guysborough (Richmond)	
7	9 – 13 July		Guysborough (Pictou transfer station) pm			
8	16 – 20 July	Otter Lake	Cumberland		East Hants	
9	23 – 27 July		Otter Lake	Kaiser Meadow (Lunenburg transfer station)		Guysborough (Sydney Transfer Station)
10	30 July – 3 August	Queens (Yarmouth transfer station)		West Hants (Windsor Truck ICI)	Cumberland	Kaiser Meadow (Kentville transfer station)
11	6 – 10 August	(Civic Holiday)	West Hants (East Hants transfer station)	West Hants (Residential) & Otter Lake	Colchester & Antigonish Res (Guysborough)	Cumberland
12	13 – 17 August	Queens (Yarmouth transfer station)	Queens Landfill (pm)	Cumberland	Queens (Clare transfer station)	Colchester
13	20 – 24 August		West Hants & Cumberland	Kaiser Meadow (landfill)	Otter Lake	Colchester & Antigonish (ICI)
14	27 – 31 August					