



Waste Audit Services Project

Final Summary Report



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ISO 9001
Registered Company

Prepared for:



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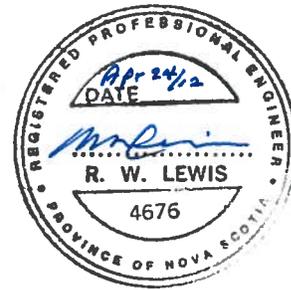
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FOREWORD BY RESOURCE RECOVERY FUND BOARD, INC. (NOVA SCOTIA)

Resource Recovery Fund Board, Inc. (Nova Scotia), better known by its familiar acronym RRFB, is tasked with five core mandates – all of which have been integral in the Province achieving its goals identified in the Nova Scotia Solid Waste Resource Management Strategy (1995).

In 2007, the Province renewed its commitment to provide residents with a cleaner and sustainable environment through the Environmental Goals and Sustainable Prosperity Act which sets out twenty-one broader and more aggressive goals, including a significant reduction in the amount of waste Nova Scotians send to landfill.

This project marks the implementation of a key component of RRFB’s strategic plan and melds its mandate to “develop and implement industry stewardship programs” with the Province’s goal of achieving a disposal rate of no more than 300 kilograms per person per year by 2015. The findings provide a wealth of information, guidance and insight for stakeholders which can serve many purposes: facilitating performance measurement, revealing best practices, targeting education and awareness efforts and much more.

Results from this project and planned successive waste audits will provide baseline data regarding types and volumes of materials entering our provincial landfills and balefills. This project is a first step in improving on Nova Scotia’s already impressive performance in solid-waste diversion and recycling. It is intended as a tool for improvement and to guide further work, helping RRFB, in partnership with municipalities and Nova Scotia Environment (NSE), to effectively focus on materials which are appropriate for diversion.

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EXECUTIVE SUMMARY

Successful planning and monitoring of waste management practices in the Province of Nova Scotia, Canada, requires the ability to accurately measure the composition and amounts of various materials disposed at the province's municipal solid waste landfills. Those materials represent the residue left after the "3 R's" of reduction, reuse and recycling efforts have diminished the amount sent to landfills. The cost and potential environmental burden which those residues present to Nova Scotians are important, and accurate statistical information assists in the planning of future initiatives to do better. Resource Recovery Fund Board, Inc. commissioned the 2011 waste audit as a key component of its strategic plan.

Detailed, professionally conducted waste audits can provide the accurate statistical information needed to identify and quantify materials which currently are being directed to final disposal, but which may have potential for diversion. In addition to carrying out the first province-wide, standardized waste audit in 2011, a procedures manual was developed to guide future audits.

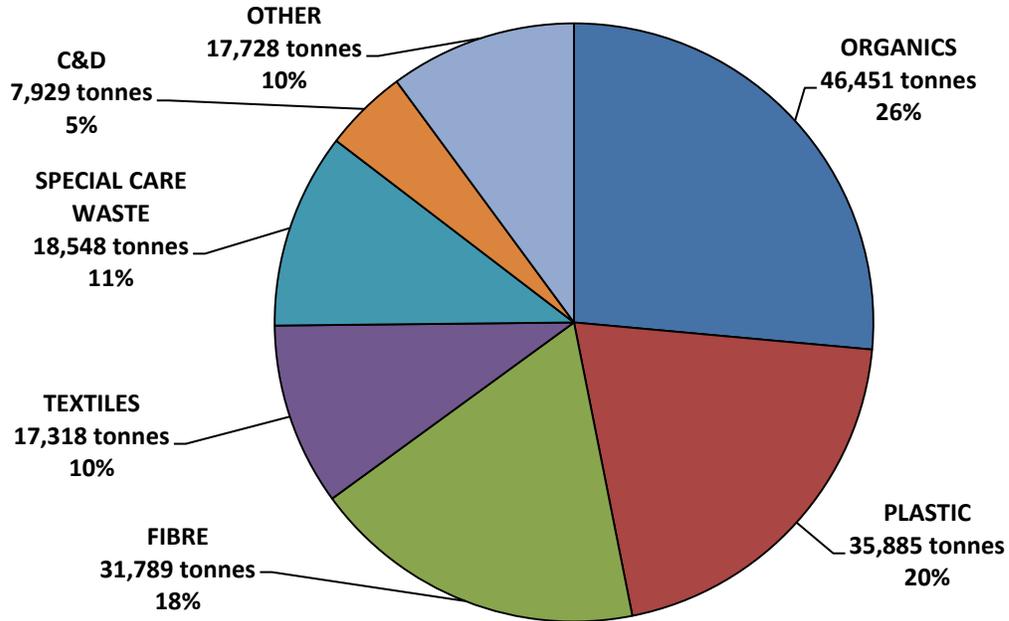
The 2011 waste audit was carried out during late March through end of June, 2011, by collecting and analyzing a total of 84 representative samples from the province's seven municipal landfill service areas. The samples were sorted into 169 categories, which can be grouped under broader headings as follows:

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

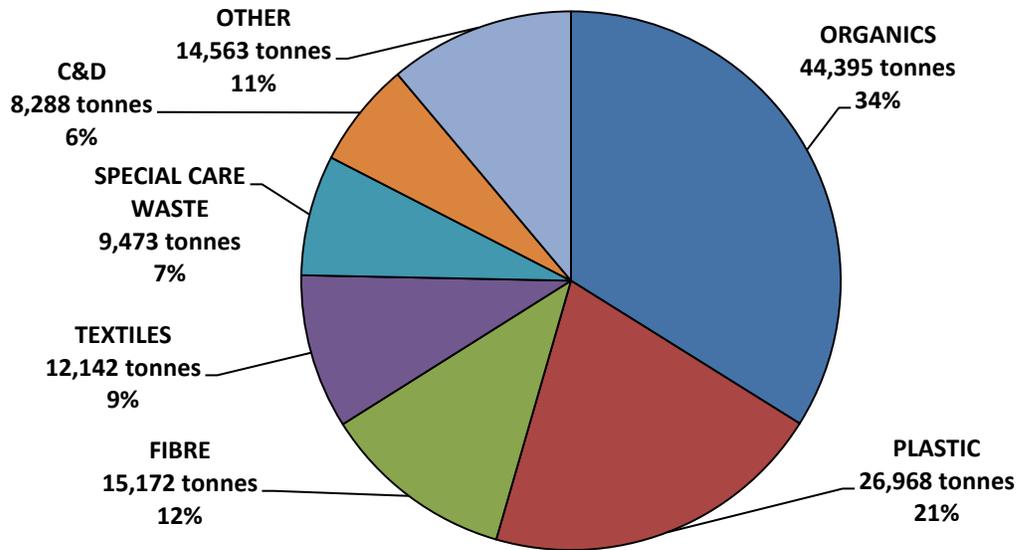
Sampling was carried out separately for two sectors representing sources of waste materials, i.e. Residential and Industrial, Commercial and Institutional (ICI) sources. An equal number of Residential and ICI samples were taken from each of the seven landfill service areas over a fourteen-week period.

When the statistics on waste composition resulting from the 2011 audit were analyzed and applied to the tonnages going to the seven municipal landfills in the fiscal reporting year 2009-2010, the results for the major groupings of materials, province wide, on a tonnage basis, are shown in these two pie charts (the top six groups are shown, with the remainder lumped as "other"):

Province-Wide Waste Composition (ICI)



Province-Wide Waste Composition (Residential)



CHAPTER 1 INTRODUCTION

The purpose of the 2011 waste audit is related to the mandate of the Resource Recovery Fund Board, Inc. (RRFB), as legislated by the Province of Nova Scotia, Canada. RRFB is a not-for-profit corporation established by but operating at arm's length from the government, delegated to administer several programs including:

- Beverage Container Program
- Used Tire Management Program
- Consumer Paint Product Stewardship Program

RRFB works in close concert with the seven solid waste-resource management regions in the province and Nova Scotia Environment (NSE) to seek out additional opportunities to divert materials from landfills. This challenge has been made even more important by recent provincial government legislation which demands reduction of landfill disposal to an average of no more than 300 kg per capita annually, by the year 2015. Maximizing diversion of waste to beneficial uses represents a clear environmental benefit and as well an economic development opportunity.

One purpose of this project, resulting in this report, was that of conducting a first province-wide waste audit on a standardized basis in Nova Scotia. The other purpose was the development of a waste audit manual tailored to RRFB's specific requirements and procedures. Both were carried out.

A particular challenge for RRFB is to carry out future waste audits so that a reasonably frequent gathering of comparable, credible information is economically achieved. This will, in future, be facilitated by the use of a highly standardized manual of practice, as it will provide the objectivity and statistical continuity desired, and also for economical and efficiently conducted audits.

CHAPTER 2 **WASTE AUDIT METHOD**

The sampling schedule for each landfill's service area was designed to maximize the time between samples within a prescribed fourteen week period, for both residential and ICI sampling. Sampling was scheduled to occur on every day of the week, Monday through Friday. The actual schedule is attached as Appendix A.

Sampling was accomplished by sending a covered truck and trained personnel to the landfill/transfer station sites to collect samples. Random sample selection and handling at the sites was as per the Canadian Council of Ministers of the Environment 1999 manual prepared SENES¹. The sorting of the samples was carried out in an industrial building, at a location fairly central to the sample collection locations, to optimize the cost of transportation involved in collection. The sorting station provided for comfortable, efficient sorting. Personnel were trained and equipped with suitable personal protective equipment. The categories into which samples were sorted were dictated by RRFB.

Selection of samples at each site was carried out by drawing materials from different points in the dumped sample load. Each sample 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 on the same load, through the use of dividers and labelling in the truck compartment. The technician then started a standard chain of custody form, such as would be used to track lab samples, as each sample was loaded. Place, category of sample, time of sampling, site conditions, waste haulage vehicle characteristics (and tare and loaded weights if available, or observation of weight otherwise), sample weight as recorded on site, and any unusual matters were recorded on a data form.

The samples were then trucked to the central sorting station, and placed in individual bunkers built for this purpose. Each bunker was labelled as to identity of the sample. The sorting of a sample would begin by moving the sample out of its bunker onto the floor. The materials were then sorted directly from the floor or on sorting tables, according to personnel preference, into the prescribed categories. Staff methodically sorted the items into clear bags and buckets, aided by a master categorization chart and labelling on bag racks so as to consistently observe the categorization required. When the sorting and weighing of a sample was completed, the next sample was processed.

¹ Canadian Council of Ministers of the Environment. 1999. *Recommended Waste Characterization Methodology for Direct Waste Analysis Studies in Canada*. See Bibliography. This manual is regarded as an exemplary practice manual, and was selected by RRFB as the methodological guide for this project.

The table of groups, categories and subcategories is shown in Appendix B.

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

- Fibre;
- Organics;
- Dairy containers;
- Non-dairy containers;
- Plastic;
- Disposable cups;
- Glass;
- Metal;
- Municipal Hazardous and Special Waste (MHSW);
- Textiles;
- Construction and Demolition (C&D);
- Bulky items;
- Special Care Waste;
- Redeemable containers;
- Regulated paint;
- Regulated tires;
- Off-road tires; and
- Regulated electronics.

The statistical results are described and illustrated in Chapter 3.

CHAPTER 3 RESULTS

The sampling plan provided for an equal number of samples to be taken from the materials destined for disposal at the seven regional landfill sites in Nova Scotia (for clarity, the landfill in Colchester County is sometimes called the “balefill”). The locations of the landfills are illustrated on the following map. Some landfills receive their materials via transfer stations and, in those cases, the number of samples taken at these sites was calculated on the proportion of tonnage received at the transfer stations versus that received at the landfill to which the waste would be sent).



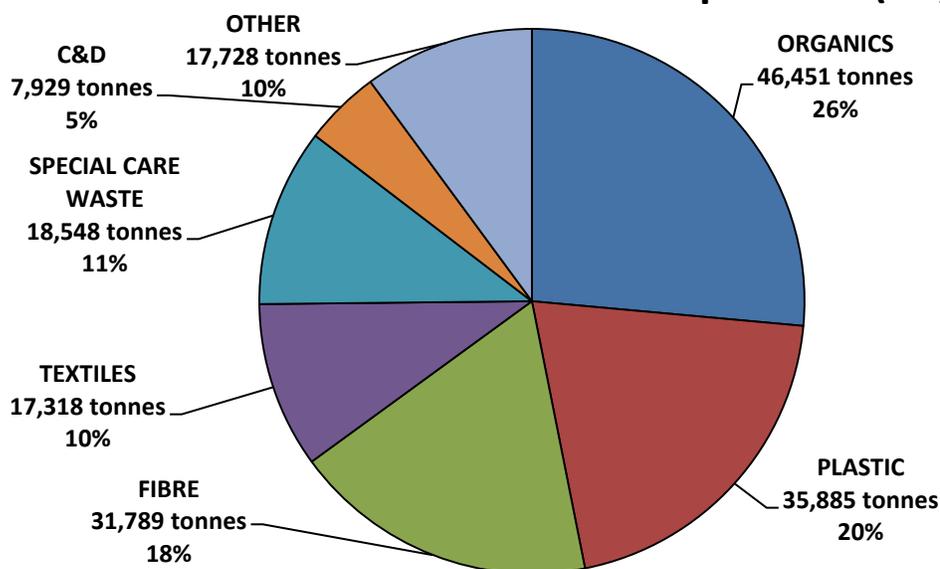
Figure 1: Solid Waste Disposal Locations

An important lesson learned in the work was that a schedule for waste audit sampling needs to be prepared with extremely detailed consultation with site operators as was done in this waste audit, concerning municipal collection schedules and traffic patterns, so that schedule changes are minimized.

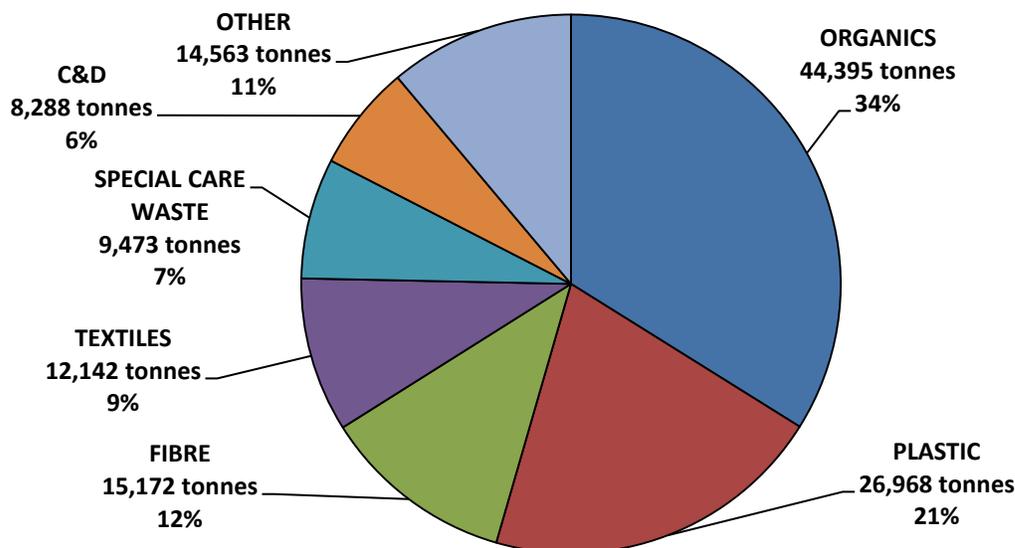
Analysis of the data was carried out, testing and validating statistical accuracy, for each of the 169 materials in the detailed categorization prescribed by RRFB. In addition, summary calculations were carried out on each material category “group”. For example, the organics “group” includes the five organics “categories” of food waste, tissue, yard waste, fibre and other. The combined “category” weights represent a total for the “group” – these totals are presented in Appendix C.

The results of the grouping, calculated for the whole province on a tonnage basis for the fiscal reporting year 2009-2010, are presented in Appendix C in the form of tables, and below in the form of pie charts:

Province-Wide Waste Composition (ICI)



Province-Wide Waste Composition (Residential)



The proportions of broad categories of waste are generally not greatly different from region to region. Certainly, local authorities will note the minor differences amongst themselves, and all will be able to use the data to analyze and consider improvements to their respective waste reduction and diversion programs.

The scope of work related to the research and production of this report does not include an interpretation of the data for planning or policy development, for example, whether the percentage occurrence of a particular category or group seems to be unusually low or high. The data, once in the hands of RRFB, may be used for further analyses of interest.

CHAPTER 4 **CONCLUSIONS**

At the conclusion of the project, the waste audit data from the 2011 audit had been properly compiled and presented, and as well, the characteristics of Nova Scotia's landfill services had been understood in the context of designing future waste audits. The process of developing the Waste Audit Manual in a template form for use in future waste audits resulted in a Manual template which is sensitive to the way in which this province's waste management system is operated.

Conclusions are included in this report to assist the reader in understanding and using the 2011 waste audit data and the Manual template.

4.1 2011 Waste Audit Data

The 2011 waste audit data was produced and compiled substantially as was originally planned. Changes to the planned operation of the audit were related to unforeseen circumstances including:

- Early in the audit schedule, winter snow deteriorated road conditions so as to prevent sample collection schedule on one day, and mechanical trouble with the collection truck similarly prevented the intended sample collection on one other day. In each case, missed samples were collected very soon afterward.
- At some collection sites, the service traffic is quite sparse. This prevented the intended collection of samples at all hours at all of the collection sites, and alternative arrangements were made with site operators in those cases to set aside samples before waste audit staff arrived on site.
- Municipal collection schedules in some municipalities did not coincide on a small number of days with sample collection, in that some areas feature alternating bi-weekly collection of organics and residue waste, and the original schedule called for collection of residue samples on the off week. Some rescheduling was needed to ensure suitable samples were taken as close to the intended schedule as possible.

The above departures from schedule, or any other matter, did not materially affect the value of the data. The processes of transporting, sorting and data recording were carried out as originally planned, with no unusual circumstances which would affect data quality.

The 2011 waste audit data was compiled as intended and no significant issues arose in the calculation or presentation of the results. The resulting data are not markedly different from the results which were

expected, i.e. there were no great departures from data similarly produced from other surveys of solid waste residue generated in Nova Scotia.

It may also be said that organics and plastics together constitute at least half of the residue waste in most locations, and that organics constitute the largest component of the residue waste stream in all cases, both residential and ICI in origin. Indeed, organics alone comprise between a quarter and a third of the residue stream in this province, in round figures.

Fibre generally constitutes about a tenth to a fifth of the waste stream, and it is seen that textiles constitute almost as much. The textiles category includes not only clothing but also bedding and footwear, but excludes carpeting.

Since the 2011 waste audit was the first comprehensive, province wide waste audit carried out in accordance with a standardized methodology, it was possible to generate some interesting data which consolidated data from the seven survey locations to produce a “whole province” estimate of weight. This required indexing of the percentage compositions of categories of waste to the different volumes of waste annually generated in each area. A calculation was carried out to reveal the approximate composition of the residue waste generated in Nova Scotia as a whole, on a weight basis.

Users of the data from the 2011 audit must always remember that it was gathered during the March – June period. As such, it should be considered to be representative of late spring and early summer times. The waste stream does vary seasonally. Future audits should be conducted such that all seasons are eventually encompassed, perhaps considering two other periods: summer and early fall (July through October) to bracket the gardening and tourism season when green yard waste production and operation of seasonal tourist facilities and summer homes are at their most intense, and a late fall and winter (November through March) when warm weather activities are curtailed and seasonal high levels of consumption of goods over the Christmas period occur. It is beyond the scope of this project to better define seasonal factors as they would relate to waste audits, so this is left as a suggested analysis to be considered by the RRFB.

The relative proportions of broad categories of waste are generally not greatly different from region to region. Certainly, local authorities will note the minor differences amongst themselves, and all will be able to use the data to consider improvements to their respective waste reduction and diversion programs.

4.2 The Manual

The research related to preparation of the Manual in template form included review of other Canadian and American jurisdictions. There were few manuals found which would be considered as standard operational guides.

Almost all documents which were found were related to specific waste audits which did not appear to be related to an ongoing documentary reference. It is not surprising that some of the persons contacted

were keen to see the result of RRFB's work in this regard, as they recognized the value of a standardized practice manual in enhancing the quality and usefulness of ongoing waste audit programs.

Reviewing the documentary materials drawn from other jurisdictions also revealed that there is a wide variety of systems of categorization of waste materials. This makes it difficult to compare data across jurisdictions, as there is no common categorization except at the level of very broad categories of material

APPENDIX A

RRFB 2011 Waste Audit Actual Schedule

RRFB 2011 Waste Audit Actual Schedule

WEEK	DATE RANGE (MON. – FRI.)	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1	21 – 25 March				Colchester	Kaizer Meadow (at Lunenburg transfer station) & Otter Lake
2	28 March – 1 April				Guysborough (at Antigonish transfer station)	West Hants (at landfill)
3	4 - 8 April		Queens (at Clare transfer station)		Otter Lake	
4	11- 15 April				West Hants (at East Hants transfer station)	Guysborough (at Sydney transfer station)
5	18 - 22 April			Queens (at Yarmouth transfer station) & Kaizer Meadow (at Kentville transfer station)	Cumberland & Colchester	Good Friday
6	25 - 29 April	Easter Monday		Otter Lake & Queens (at landfill)	Kaizer Meadow (at Lawrencetown transfer station)	Cumberland & Colchester
7	2 - 5 May			Queens (at Clare transfer station) & West Hants (at landfill)	Guysborough (at Inverness transfer station)	
8	9 - 13 May		West Hants (at East Hants transfer station)	Cumberland Colchester		
9	16 - 20 May		Queens (at Yarmouth transfer station) & Kaizer Meadow residential only (at landfill)	Guysborough (at landfill)	Kaizer Meadow ICI only (at landfill)	
10	23 - 27 May	Victoria Day	Cumberland & Colchester	Otter Lake		
11	30 May – 3 June	Guysborough (at Sydney transfer station)	West Hants (at West Hants landfill, residential only – vehicle from Town of Windsor collection) & Kaizer Meadow (at Lunenburg transfer station)			
12	6 - 10 June	Queens (at landfill) & Otter Lake	Cumberland & West Hants (at West Hants landfill, ICI only)			Queens (at Clare transfer station)
13	13 - 17 June	Colchester & Kaizer Meadow (at Kentville transfer station)	Guysborough (at Pictou transfer station)			
14	20 - 24 June	Cumberland & West Hants at East Hants transfer station	Otter Lake			

APPENDIX B

2011 Waste Audit Categorization

2011 Waste Audit Categorization

MATERIAL GROUP	CATEGORY	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 Moulded 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 Facial tissue and gift wrapping paper tissue
	Yard Waste	23 Home/ICI gardening, brush, leaves		
	Other	24 Food in containers, including weight of containers		
	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		
		30 Tetra pak		
		31 Plastic bag (LDPE film - Number 4)		
	Ice Cream	32 Plastic container (HDPE - Number 2)		
		33 Boxboard container (with lining)		
	Other Dairy	34 Plastic container (HDPE - #2, PP - #5, PS - #6)		
		35 Plastic container (other than 2, 5 and 6)		
		36 Tetra pak		

MATERIAL GROUP	CATEGORY	SUB-CATEGORIES
	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

MATERIAL GROUP	CATEGORY	SUB-CATEGORIES
		73 Steel food containers
		74 Steel composite containers
		75 Steel - other
	Non-Paint Program	76 Aluminum
	Pressurized Containers	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 Refillable
	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 (Crankshaft) oil filters	99
		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

MATERIAL GROUP	CATEGORY	SUB-CATEGORIES
		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
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	Diapers	133
CARE WASTE	Other	134 Medical gloves, pharmaceuticals, 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)

MATERIAL GROUP	CATEGORY	SUB-CATEGORIES	
		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	Empty plastic	152	
PAINT	Empty metal	153	
	Empty aerosols	154	
REGULATED	Passenger and Light Truck	155	
TIRES	Tractor Trailer	156	
OFF-ROAD	Non-Tire Program items	157	Small
TIRES		158	Large
REGULATED	Computers	159	Desktop
ELECTRONICS		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	

Statistical Analysis – Grouped Categories

Landfill Amounts Disposed During April 1, 2009 to March 31, 2010.

Tonnages	Metric Tonnes	
	ICI	Residential
Colchester	15,103	6,810
Cumberland	4,249	5,494
Guysborough	39,120	28,095
Kaizer Meadow	16,780	17,991
Otter Lake	84,573	55,987
Queens	9,426	9,858
West Hants	6,397	6,762
Sum	175,648	130,997

Tonnages for each of the groups of materials disposed province-wide are estimated using total waste arriving at respective landfills as shown above, from the respective ICI or Residential sector, and the percentages of occurrence from this study.

ICI	Tonnes	% of total
FIBRE	31,789	18.1
ORGANICS	46,451	26.4
DAIRY	669	0.4
NON-DAIRY	8	0.0
PLASTIC	35,885	20.4
DISPOSABLE CUPS	6,034	3.4
GLASS	1,050	0.6
METAL	3,763	2.1
MUNICIPAL HAZARDOUS AND SPECIAL WASTE (MHSW)	549	0.3
TEXTILES	17,318	9.9
C&D	7,929	4.5
BULKY ITEMS	1,588	0.9
SPECIAL CARE WASTE	18,548	10.6
REDEEMABLE CONTAINERS	2,706	1.5
REGULATED PAINT	377	0.2
REGULATED TIRES	407	0.2
OFF-ROAD TIRES	123	0.1
REGULATED ELECTRONICS	451	0.3
	175,645	99.9

Residential	Tonnes	% of total
FIBRE	15172	11.6
ORGANICS	44395	33.9
DAIRY	757	0.6
NON-DAIRY	22	0.0
PLASTIC	26968	20.6
DISPOSABLE CUPS	1457	1.1
GLASS	1691	1.3
METAL	6018	4.6
MUNICIPAL HAZARDOUS AND SPECIAL WASTE (MHSW)	821	0.6
TEXTILES	12142	9.3
C&D	8288	6.3
BULKY ITEMS	592	0.5
SPECIAL CARE WASTE	9473	7.2
REDEEMABLE CONTAINERS	1711	1.3
REGULATED PAINT	118	0.1
REGULATED TIRES	33	0.0
OFF-ROAD TIRES	106	0.1
REGULATED ELECTRONICS	1236	0.9
	131,000	100