

# Waste Management Industry Survey: Business Sector, 2008

**Confidential when completed.**

*Si vous préférez ce questionnaire en français, veuillez nous appeler au numéro sans frais : 1-888-659-8229.*

Collected under authority of *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S19.

Correct as required:

Legal name									
Operating name									
C/O									
Address									
City									
Province/Territory					Postal code				

## Please read before completing

### PURPOSE OF SURVEY

This survey collects information that will help Canadians understand the contributions made by the waste management industry to Canada's economy and environment. The results will assist businesses in the industry as well as public policy makers to make sound decisions based on data that apply specifically to the waste management industry. **Statistics Canada is also conducting a survey of government sector waste management for 2008.** Together these surveys will provide a comprehensive picture of waste management in Canada.

### CONFIDENTIALITY

Statistics Canada is **prohibited by law** from publishing any statistics which would divulge information obtained from this survey that relates to any identifiable respondent without their previous written consent. The data reported will be treated in strict confidence and used for statistical purposes only. The confidentiality provisions of the *Statistics Act* are not affected by either the *Access to Information Act* or any other legislation.

### AUTHORITY

This survey is conducted under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S19. **COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THE STATISTICS ACT.**

### INQUIRIES

If you require assistance in completing this questionnaire or if you have any questions or comments regarding this survey, please contact:

**Operations and Integration Division**

**Statistics Canada**

**Ottawa, Ontario K1A 0T6**

Telephone (toll-free): **1-888-659-8229**

Fax: **1-800-755-5514**

E-mail: [enviro-waste-bus@statcan.gc.ca](mailto:enviro-waste-bus@statcan.gc.ca)

In all correspondence concerning this questionnaire, please quote the identification number that appears on the address label.

### HOW TO COMPLETE THIS QUESTIONNAIRE

Use a black or blue pen

Fill in a circle  OR Enter a number in a box

OR Print in a box

### IMPORTANT:

Please refer to the definitions at the back of the questionnaire before answering. If your response for an item is zero, please write "0" in the corresponding box rather than leaving the cell blank. Where a response in dollars is requested, please answer in Canadian Dollars.

**Please return this questionnaire within 30 days of receipt.**

If you are unable to do so, kindly inform Operations and Integration Division of the expected completion date.

Statistics Canada use only

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Coll.

FSC

## Section 1 - Business Information

### Business type

**1.1 This questionnaire should be completed for this company's operation in one province/territory only.** If this company provides waste management services in more than one province/territory, a separate report for the other provinces/territories in which this company operates should be filled out. You may wish to photocopy this questionnaire or you may call us toll-free at 1-888-659-8229 to request additional questionnaires.

**Province/territory for which this report applies:**

101

**1.2 Did this company provide waste management services in more than one province/territory in 2008?**

102  Yes ▶ Go to question 1.3  No ▶ Go to question 1.4

**1.3 Please indicate the other provinces/territories in which this company provides waste management services and for which you will be returning reports. Mark all that apply.**

121  N. L.    123  N. S.    125  Que.    127  Man.    129  Alta.    131  Y. T.    133  Nvt.  
122  P. E. I.    124  N. B.    126  Ont.    128  Sask.    130  B. C.    132  N. W. T.

**1.4 Please indicate which of the following waste management activities and/or services this company provides in the province/territory indicated in question 1.1. See definitions at the back of this questionnaire. Mark all that apply.**

#### Non-hazardous waste (garbage), recyclables and organics

- 105  Waste collection, residential
- 106  Waste collection, non-residential (IC&I and C&I)
- 134  Waste hauling or transportation
- 108  Recyclable material collection/organic material collection, residential
- 109  Recyclable material collection/organic material collection, non-residential
- 112  Recycling/organic processing services (e.g., material recycling facility, composting facility)
- 110  Waste transfer station
- 114  Waste disposal/processing facility
- 135  Other non-hazardous waste services (please specify) 136

#### Hazardous waste

- 107  Waste collection
- 111  Waste transfer facility
- 113  Waste treatment
- 137  Waste recycling
- 115  Waste disposal facility
- 138  Other hazardous waste services (please specify) 139

#### Other waste management activities or services

- 116  Sewage treatment and containment
- 117  Other (please specify) 118

## Reporting period

1.5 Financial information should be reported for this company's most recent fiscal year that ended at any time between April 1, 2008 and March 31, 2009.

Specify company's fiscal year Start: <sup>119</sup>      Year      Month      Day      End: <sup>120</sup>      Year      Month      Day

## Section 2 - Collection/transportation of non-hazardous waste (garbage), recyclables, and organic material

For businesses engaged in only hazardous waste management activities/services, please proceed to Section 6: Financial and employment information.

### Collection/transportation of non-hazardous waste (garbage)

2.1 In 2008, did this company provide or sub-contract services for the collection and/or transportation of non-hazardous waste to a landfill, incinerator / energy from waste facility, residual waste processor or a transfer station?

201  Yes ▶ Go to question 2.2       No ▶ Go to question 2.3

2.2 Please specify the name(s) of the facility(ies) where waste was taken. Include only final destinations such as landfills, incinerators / energy from waste facilities, residual waste processors, etc. Do not specify transfer stations unless it is the final destination for waste collected/transported by this company.

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### Collection/transportation of non-hazardous recyclable materials

2.3 In 2008, did this company collect/transport non-hazardous recyclable materials?

212  Yes ▶ Go to question 2.4       No ▶ Go to question 2.5

2.4 Please specify the name(s) of the facility(ies) where the recyclable materials were taken.

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**Collection/transportation of organic materials**

2.5 In 2008, did this company collect/transport organic materials for processing (e.g., composting, anaerobic digestion)?

246  Yes ▶ Go to question 2.6  No ▶ Go to section 3

2.6 Please specify the name(s) of the facility(ies) where the organic materials were processed.

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**Section 3 - Waste diversion: Organic material processing and recycling**

**Organic material processing (composting, anaerobic digestion)**

3.1 In 2008, did this company own and/or operate a facility where organic materials were processed?

Please include landfills or sites where organic materials were composted.

327  Yes ▶ Please complete the following.  No ▶ Go to question 3.3

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.

367

Please include all quantities of food waste, materials from source separated organics programs (SSO), leaf and yard waste as well as Christmas trees and pumpkins.

Name and owner of facility	Year opened	Quantity of materials entering the facility <i>(metric tonnes)</i>	Sources of materials (percentage) <i>(Please see definitions at the back of this questionnaire)</i>			Material disposed as processing residue (e.g., contaminated materials) (%)
			Residential (%)	Non-residential (IC&I and C&D) (%)	Totals should equal 100%	
329 <input type="text"/>	331 <input type="text"/>	332 <input type="text"/>	368 <input type="text"/>	369 <input type="text"/>	100%	371 <input type="text"/>
336 <input type="text"/>	338 <input type="text"/>	339 <input type="text"/>	372 <input type="text"/>	373 <input type="text"/>	100%	375 <input type="text"/>
343 <input type="text"/>	345 <input type="text"/>	346 <input type="text"/>	376 <input type="text"/>	377 <input type="text"/>	100%	379 <input type="text"/>
Total ▶		364 <input type="text"/>				

**3.2 Please indicate the quantity of each type of organic material processed at the facility(ies) listed in question 3.1.**

Type of material	Quantity of organic materials (metric tonnes)	Type of material	Quantity of organic materials (metric tonnes)
Leaf & yard waste ▶	<sup>183</sup> [Progress indicator]	Biosolids ▶	<sup>185</sup> [Progress indicator]
Food waste / SSO materials ▶	<sup>184</sup> [Progress indicator]	Other (please specify) <sup>186</sup> [Text box] ▶	<sup>189</sup> [Progress indicator]
Forestry waste / Wood waste ▶	<sup>187</sup> [Progress indicator]	Other (please specify) <sup>190</sup> [Text box] ▶	<sup>191</sup> [Progress indicator]
Agricultural waste ▶	<sup>188</sup> [Progress indicator]	Other (please specify) <sup>194</sup> [Text box] ▶	<sup>192</sup> [Progress indicator]

**Recycling**

**3.3 In 2008, did this company own and/or operate a material recycling facility (MRF), recycling centre or drop-off depot (municipally or privately owned) where materials were prepared/collected for recycling?**

<sup>385</sup>  Yes ▶ Go to question 3.4       No ▶ Go to section 4

**3.4 Please complete the following.**




Name and owner of facility	Sources of materials (percentage) <i>(Please see definitions at the back of this questionnaire)</i>				Material disposed as processing residue (e.g., contaminated materials) (%)
	Residential (%)	Non-residential (IC&I) (%)	Construction and demolition (C&D) (%)	Totals should equal 100%	
<sup>225</sup> [Text box]	<sup>228</sup> [Progress indicator]	<sup>229</sup> [Progress indicator]	<sup>230</sup> [Progress indicator]	<b>100%</b>	<sup>386</sup> [Progress indicator]
<sup>232</sup> [Text box]	<sup>235</sup> [Progress indicator]	<sup>236</sup> [Progress indicator]	<sup>237</sup> [Progress indicator]	<b>100%</b>	<sup>387</sup> [Progress indicator]
<sup>239</sup> [Text box]	<sup>242</sup> [Progress indicator]	<sup>243</sup> [Progress indicator]	<sup>244</sup> [Progress indicator]	<b>100%</b>	<sup>388</sup> [Progress indicator]

Please list additional facilities in the Comments Section (Section 7).

**3.5 Please indicate the quantities of materials marketed from the facilities indicated in 3.4. Only count quantities once. Exclude organic materials reported in question 3.1.**

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.

▶ 389

Type of material	Quantity of materials marketed (metric tonnes)	Type of material	Quantity of materials marketed (metric tonnes)
Newspprint, phone books, magazines ▶	314 <input type="text"/>	Plastic – PET (1)  ▶	391 <input type="text"/>
Corrugated cardboard ▶	315 <input type="text"/>	Plastic – HDPE (2)  ▶	392 <input type="text"/>
Mixed paper fibre and boxboard ▶	316 <input type="text"/>	All other plastic (3-7)  ▶	393 <input type="text"/>
Glass ▶	317 <input type="text"/>	Mixed plastics ▶	323 <input type="text"/>
Ferrous metals (including ferrous scrap metal) ▶	318 <input type="text"/>	Aseptic containers / tetra packs ▶	398 <input type="text"/>
White goods ▶	395 <input type="text"/>	Gable top containers (e.g., milk cartons) ▶	399 <input type="text"/>
Aluminum ▶	394 <input type="text"/>	Electronics ▶	396 <input type="text"/>
Copper ▶	397 <input type="text"/>	Tires ▶	397 <input type="text"/>
Mixed metals (ferrous and non-ferrous) ▶	322 <input type="text"/>	C & D materials (Please exclude asphalt, concrete, rubble and land clearing debris) ▶	324 <input type="text"/>
Other (Please specify) <sup>366</sup> <input type="text"/> ▶			325 <input type="text"/>
<b>Total materials marketed</b> ▶			326 <input type="text"/>

## Section 4 - Management of non-hazardous waste (garbage)

### Transfer Stations

4.1 In 2008 did this company own and/or operate a transfer station for non-hazardous waste?

<sup>501</sup>  Yes ▶ Go to question 4.2

No ▶ Go to question 4.3

4.2 For each transfer station operated in this province/territory in 2008, please indicate the name, owner and provide your best estimate of the sources of waste and the total quantity of the waste managed through the transfer station.

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.



502

Name and location of transfer station	Owner of this facility if not self	Approximate percentage of total waste managed through the facility, by source			Weight scale present?	Quantity of waste managed through the transfer station (metric tonnes)
		Residential	Non-residential (IC&I)	Construction and demolition (C&D)	If yes, fill in circle	
503	504	505	506	507	508	509
					<input type="radio"/>	
510	511	512	513	514	515	516
					<input type="radio"/>	
517	518	519	520	521	522	523
					<input type="radio"/>	
524	525	526	527	528	529	530
					<input type="radio"/>	
531	532	533	534	535	536	537
					<input type="radio"/>	
538	539	540	541	542	543	544
					<input type="radio"/>	
<b>Total waste managed through transfer stations</b> ▶						545

## Waste (garbage) disposal or processing

**4.3 Did this company own and/or operate a facility where waste was disposed/processed in 2008?** *Include all types of landfills (e.g., sanitary, stabilized, bioreactor), incineration/thermal treatment (e.g., energy from waste, gasification) and residual waste processing (e.g., conversion of non-recyclable waste to an alternative fuel source).*

401  Yes ▶ Go to question 4.4

No ▶ Go to section 5

**4.4 For each facility that this company operated in the province/territory in 2008, indicate the name, type of facility and the sources and amount of waste disposed/processed in the facility as measured by weigh scales or by providing your best estimate.** *Please see definitions at the back of this questionnaire.*

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.

▶ 477

Name of facility	Owner of this facility if not self	Please indicate type of facility as Landfill (LF), Processor (P) or Incinerator (IN), (fill in one only)	Approximate percentage of total waste disposed/processed, by source			Weigh scale present?  If yes, fill in circle	Quantity of waste disposed/processed in the facility in 2008  (metric tonnes)
			Residential	Non-residential (C&I)	Construction and demolition (C&D)		
403	404	405	407	408	409	410	411
412	413	414	416	417	418	419	420
421	422	423	425	426	427	428	429
430	431	432	434	435	436	437	438
439	440	441	443	444	445	446	447
448	449	450	452	453	454	455	456
457	458	459	461	462	463	464	465
466	467	468	470	471	472	473	474
Total waste disposed/processed in facilities ▶							475



## Landfills

The following question pertains to landfills. If no landfills were reported in question 4.4, please go to section 5.

**4.5** Please fill in the table below specifying if the landfill(s) reported in question 4.4 received any of the following materials, the quantity received, unit of measure and whether it was included in your response to 4.4 (quantity of waste disposed in landfill).

Type of material	Received at your landfill?	Quantity	Unit of measure (e.g., metric tonnes, kilograms)	Included in 4.4?
Bottom ash from sewage sludge or solid waste incineration ▶	573 <input type="radio"/> Yes <input type="radio"/> No	575 [Quantity grid]	584 [Unit of measure box]	581 <input type="radio"/> Yes <input type="radio"/> No
Contaminated soil ▶	576 <input type="radio"/> Yes <input type="radio"/> No	578 [Quantity grid]	585 [Unit of measure box]	579 <input type="radio"/> Yes <input type="radio"/> No
Clean fill ▶	582 <input type="radio"/> Yes <input type="radio"/> No	583 [Quantity grid]	586 [Unit of measure box]	580 <input type="radio"/> Yes <input type="radio"/> No

**4.6** In 2008, did this company contribute to a post closure and maintenance fund for the landfill(s)?  
See definitions at the back of this questionnaire.

587  Yes ▶ \$ <sup>847</sup> [Amount grid]  No ▶ Go to section 5

## Section 5 - Exports and imports of non-hazardous materials

### Exports and imports of waste (garbage) for disposal/processing

**5.1 Did this company transport/export non-hazardous waste for disposal/processing to another province/territory or to the U.S.A. in 2008?** *Include direct shipments and shipments from transfer stations.*

601  Yes ▶ *Please complete the following.*  No ▶ *Go to question 5.2*

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.



655

Name and owner of facility	Location/Address	Quantity of waste sent to another province/territory	Quantity of waste sent to the U.S.A
		(metric tonnes)	(metric tonnes)
615	616	617	618
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
619	620	621	622
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
623	624	625	626
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Total waste exported for disposal/processing</b> ▶		607	610
		<input type="text"/>	<input type="text"/>

**5.2 Was non-hazardous waste from outside this province/territory disposed/processed in this company's facility (e.g., landfill, incinerator/energy from waste, or residual waste processing facility) in this province/territory in 2008?**

646  Yes ▶ *Please complete the following.*  No ▶ *Go to section 5.3*

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.



647

	Quantity of waste from other provinces/territories	Quantity of waste from the U.S.A.
	(metric tonnes)	(metric tonnes)
<b>Total waste imported for disposal/processing</b> ▶	651	653
	<input type="text"/>	<input type="text"/>

## Exports and imports of recyclable materials and organic materials

**5.3 Did this company transport/export recyclable materials to a material recycling facility (MRF) outside of this province/territory in 2008?** Do not include exports of recyclable materials to end markets in other provinces or the U.S.A. Report organic material exports in question 5.4.

656  Yes ► Please complete the following.  No ► Go to question 5.4

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.

► 657

Name and owner of facility	Location/Address	Quantity of recyclables exported to another province/territory (metric tonnes)	Quantity of recyclables exported to the U.S.A. (metric tonnes)
658 <input type="text"/>	659 <input type="text"/>	660 <input type="text"/>	661 <input type="text"/>
662 <input type="text"/>	663 <input type="text"/>	664 <input type="text"/>	665 <input type="text"/>
<b>Total recyclable materials exported</b> ►		666 <input type="text"/>	667 <input type="text"/>

**5.4 Did this company transport/export organic materials for processing (e.g., composting, anaerobic digestion) to a facility outside of this province/territory in 2008?**

668  Yes ► Please complete the following.  No ► Go to question 5.5

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.

► 669

Name and owner of facility	Location/Address	Quantity of organics processed in another province/territory (metric tonnes)	Quantity of organics processed in the U.S.A. (metric tonnes)
670 <input type="text"/>	671 <input type="text"/>	672 <input type="text"/>	673 <input type="text"/>
674 <input type="text"/>	675 <input type="text"/>	676 <input type="text"/>	677 <input type="text"/>
<b>Total organic materials exported</b> ►		680 <input type="text"/>	681 <input type="text"/>

**5.5 Were recyclable materials and/or organic materials from outside this province/territory processed at this company's MRF or composting/anaerobic digestion facility in 2008?**

683  Yes ▶ Please complete the following.  No ▶ Go to section 6

If you are not reporting quantities in metric tonnes, please specify the unit of measure used.

▶ 684

	Quantity of recyclables from other provinces/territories (metric tonnes)	Quantity of recyclables from the U.S.A. (metric tonnes)	Quantity of organic materials from other provinces/territories (metric tonnes)	Quantity of organic materials from the U.S.A. (metric tonnes)
<b>Total materials imported</b> ▶	685 <input type="text"/>	686 <input type="text"/>	687 <input type="text"/>	688 <input type="text"/>

**Section 6**

**Financial and employment information**

**6.1 Gross Operating Revenues.** Indicate this company's 2008 gross revenues (to the nearest dollar) from the provision of waste management services. Do not net out expenditures.

**Total revenues** ▶ <sup>811</sup> \$

**6.2 Please indicate the percentage of total gross revenues (reported in question 6.1) received from the provision of each of the following.**

	Percentage
Collection of waste, recyclables, organics ▶	801 <input type="text"/>
Operation of a non-hazardous waste transfer facility, landfill, incinerator, processing facility ▶	805 <input type="text"/>
Operation of a MRF or organic processing facility/site ▶	804 <input type="text"/>
Operation of hazardous waste facilities (treatment, transfer, containment, recycling, incineration or disposal facility) ▶	806 <input type="text"/>
Sewage treatment/containment ▶	807 <input type="text"/>
Other waste management revenues (e.g., consulting, brokerage fees) Please specify: <sup>834</sup> <input type="text"/> ▶	808 <input type="text"/>
Sale of recovered materials ▶	809 <input type="text"/>
Other non-waste management revenues <sup>835</sup> Please specify: <input type="text"/> ▶	810 <input type="text"/>
<b>Total should equal</b> ▶	<b>100%</b>

**6.3 Gross Operating Expenditures.** Please report this company's 2008 gross operating expenses (to the nearest dollar). Include expenses reported in question 4.6 if applicable (post closure and maintenance fund).

Total operating expenditures ▶ <sup>823</sup> \$

**6.4 Capital Expenditures.** Report this company's total capital expenditures for 2008. Include any new (non-amortized) capital expenditures, new assets purchased in Canada and all imported assets (new and used).

Total capital expenditures ▶ <sup>830</sup> \$

**6.5 Employment.** Report the average number of full time (30 or more hours per week) and average number of part time (less than 30 hours per week) employees whose primary function is working on the waste management activities of this company in 2008. Do not specify full-time equivalents for part-time employees. Do not include contract employees or sub-contractor's employees.

Average number of employees in 2008	
Full-time	Part-time
832 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	833 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

Total employees ▶

## Section 7

### Certification

**7.1 I certify that the information contained in this report is correct and complete to the best of my knowledge.**

Signature

Date

0015

Year

Month

Day

Name of person completing this report

0013

Telephone

0017

Extension

0027

Title of person completing this report

0014

Fax

0016

E-mail address

0018

Website address

0020

**7.2 Approximately how much time was spent filling out this survey and calculating the figures required?**

901

Hours

## Comments

Please provide any comments you may have about this survey (e.g., length, ease of completion, suggestions for future questions, suggestions about the format). Also, please use this space or attach additional documentation if you wish to provide additional information about your waste management activities.

FOR INFORMATION ONLY

**If you have any questions, please contact:**  
**Operations and Integration Division, JT-2-C4,**  
**Statistics Canada, Ottawa, Ontario, K1A 0T6**  
**Telephone (toll free) 1-888-659-8229**  
**Fax: 1-800-755-5514**  
**Email: [enviro-waste-bus@statcan.gc.ca](mailto:enviro-waste-bus@statcan.gc.ca)**

**Please return this  
questionnaire in the  
envelope provided**

Thank-you for your participation!

### Introduction

Waste statistics are important sets of information used to determine public policy and environmental practices. The Environment Accounts and Statistics Division of Statistics Canada plays a significant role in developing environmental statistics for Canada. One of the Division's objectives is to develop a complete set of statistics on the physical and financial dimensions of the management of waste.

### What is waste?

There have been several definitions of waste proposed in recent years. One common thread among these definitions is the concept that waste is a material that is unwanted by its producer. The unwanted materials may be by-products of a production process – fly ash from a furnace, for example. Alternatively they might be products, the inherent value of which has been consumed from the perspective of the current holder – for example, a newspaper that has been read, a package that has been opened and emptied of its contents or an apple eaten to the core are all similar insofar as they have lost their original inherent value from the consumers perspective.

If these materials lose this inherent value to such a degree that permanent disposal is the most viable option or perhaps the only available option, then a waste services provider acts as an agent that relieves the generator of the waste of the burden of disposal.

However, the material may have value from the perspective of someone else – the newspaper can be used as an input at a pulp and paper plant or the apple can be used by a composting facility – thus a waste services provider may divert such a material from the waste stream. Value is reintroduced to the material through a process that treats the material in such a way as to enable it to be reintroduced back into the market place as a valuable good. For example, the newspaper may be collected and taken to a Material Recycling Facility (MRF) where it is sorted from other items, bundled and compacted – thus preparing it in such a fashion that it is marketable (valuable) to a buyer such as a pulp and paper mill.

### What is the waste management industry?

The Canadian waste management industry embodies two inter-related elements – governments and other public organisations that provide or make provision for waste management services and private firms that supply these

services. To supply the information needed to depict these two elements, two survey vehicles are utilised. One is the Waste Management Industry: Business Sector Survey and the other is the Waste Management Industry: Government Sector Survey. Both of these surveys gather financial and human resource (e.g., revenues, expenditures, employment) and physical information (e.g., quantities of different types of waste disposed of or recycled) about the waste management industry.

For the purposes of these surveys, the waste management industry broadly includes all firms and public bodies operating in Canada that provide the services of collection, transportation, diversion, treatment, or disposal of waste or recyclable materials. The majority of the establishment's revenue will come from provision of these services. To further define these broad activities:

- » Waste, recyclable and organic materials collection methods are curbside collection, back door pick-ups, and automated collection. The waste, recyclable or organic materials may be taken to an intermediate site or to a final disposal site.
- » Waste diversion includes any physical transformation of materials in preparation for recycling or reuse. Such activities include sorting, cleaning, and volume reduction as well as composting and anaerobic digestion.
- » Waste disposal facilities include landfills and incinerators/energy from waste facilities

#### Please exclude:

- » Wastes that are associated with primary resource extraction or harvesting (e.g. farm manure, fish waste from fish processing, market garden waste, orchard and urban forest tree prunings, mine or mill tailings, forest industry waste)
- » Conventional air pollutants
- » Liquid effluents from processing or manufacturing sites
- » Any materials used as landfill cover

- » Clean or contaminated soil including soil used as landfill cover
- » Industrial sludge
- » Gravel and rocks
- » By-products generically referred to as nuclear wastes
- » Oil field waste
- » Waste from portable toilets

This is consistent with the definition of waste used by the Canadian Council of Ministers of the Environment.

### **Estimating sources of waste (garbage), recyclables and organic materials**

It is acknowledged that it is often very difficult to track the quantities of waste and recyclable materials by source unless the business or local government collects or prepares materials from only one source (e.g., a firm that collects waste

only from IC&I sources).

In this survey, you are being asked to estimate the proportion of materials by source of material at three points (if applicable and known) at the facility where organic material is processed, at the facility where recyclables are prepared and at disposal. If you engage in one or more of these activities, you will be asked to estimate the proportion of waste, recyclable or organic materials from residential, non-residential and construction and demolition sources. While it is recognized that such estimates may be difficult to make, you are asked to be as accurate as possible.

## **Definitions**

### **Agricultural waste**

All waste materials produced as a result of agricultural activities, including, for example, residues from the application of pesticides, herbicides, fertilizers and other chemicals, wastewater, manure, bedding material, etc.

### **Anaerobic digestion**

A series of processes in which microorganisms break down biodegradable material in the absence of oxygen.

### **Bioreactor landfill**

A landfill where water and air are circulated into a specifically designed landfill in order to cause accelerated biological decomposition of waste material.

### **Biosolids**

Includes solid or semisolid material obtained from treated wastewater.

### **Bottom ash**

The residue ash that remains after the incineration of a waste material.

### **Clean fill**

Uncontaminated inert solid material including soil, rock, stone, dredged material, used asphalt, and brick, block or concrete. The soil is considered 'clean' because it has not been contaminated or affected, for example by a spill or release of toxic materials.

### **Composting**

Composting is an aerobic biological treatment process used most frequently in Canada at this time for management of biodegradable waste such as leaf and yard waste or food wastes. See also anaerobic digestion.

### **Construction and demolition waste (C&D)**

C&D waste, also referred to as DLC (demolition, landclearing and construction waste), refers to waste generated by construction and demolition activities. It generally includes materials such as brick, painted wood, drywall, metal, cardboard, doors, windows, wiring, etc. It excludes materials from land clearing on areas not previously developed. C&D waste can come from residential sources such as house renovations or from non-residential sources for example the construction or demolition of office buildings.



## Contaminated soil

Soils containing materials that, by their nature, require controlled disposal.

## Electronics

Electronics are items that function through the use of electricity and/or batteries. Also included are items that have a circuit board but do not necessarily require electricity from an outlet such as telecommunication equipment. Examples are personal computers, laptops, monitors, peripherals (e.g. printers, scanners), telephones, cell phones, facsimile machines, stereos, portable music players and children's toys containing electronic components.

## Energy from waste (EFW)

EFW refers to any waste treatment that creates energy in the form of electricity or heat from a waste source. Most EFW processes produce electricity directly through combustion, or produce a combustible fuel commodity, such as methane, methanol, ethanol or synthetic fuels.

## Ferrous metals

These are metals which contain iron. They may have small amounts of other metals or other elements added, to give the required properties. All ferrous metals are magnetic and give little resistance to corrosion. Steel is an example of a ferrous metal. The recycling of ferrous metals include but is not limited to the processing of tin/steel cans, strapping, as well as the extraction of metals from appliances.

## Food waste

Includes food wastes and food scraps from households and non-residential sources such as grocery stores, restaurants, etc, destined for composting or anaerobic digestion.

## Forestry waste

The debris or leftover waste from the management of forests. This would include trees, stumps, branches, etc., that were discarded.

## Gasification

A process, in the context of waste, that uses heat, pressure and steam to convert materials directly into a combustible gas.

## Hazardous waste

Includes materials or substances that given their corrosive, inflammable, infectious, reactive and toxic characteristics,

may present a real or potential harm to human health or the environment. Due to their hazardous nature they require special handling, storing, transportation, treatment and disposal as specified by the Transportation of Dangerous Goods Regulations (1985), The Canadian Environmental Protection Act (1988), The Basel Convention (1989), or the Export and Import of Hazardous Waste Regulations (1992).

## Hazardous waste disposal

Disposal of hazardous waste at a facility that meets legal standards for the disposal of hazardous waste (e.g., by incineration, controlled confinement, landfilling and other methods).

## Hazardous waste recycling

The recycling of hazardous wastes involves the treatment or processing of these wastes in order to reduce or transform them into a new or reusable product or material that can in turn be used as an input into another production process.

## Hazardous waste transfer facility or station

Consolidation, temporary storage, and preparation for transport of hazardous waste to an appropriate facility for treatment, disposal, or reuse. Includes drop-off center services, transfer and container stations.

## Hazardous waste treatment

Treatment to reduce, eliminate, or transform hazardous waste. Processes include biological, chemical, and/or physical procedures; such processes may lead to disposal and/or to the recovery of recyclable material. Treatment services exclude incineration.

## Household hazardous/special waste (HHW)

Materials generated by residential households that can not be collected in standard residential recycling programs and present a risk to municipal waste management systems because of their hazardous and/or toxic nature. This includes solid or liquid materials, or containers holding gases which have outlived their usefulness. This waste may be flammable, corrosive, explosive or toxic and therefore should not be disposed in landfills or sewage systems.

## Incineration / thermal treatment

Incineration, in the context of waste, refers to the burning of waste. Incineration of waste materials converts the waste into incinerator bottom ash, flue gases, particulates, and heat, which can in turn be used to generate electric power. Most jurisdictions in Canada consider incineration to be disposal.

## **Industrial, commercial and institutional waste (IC&I, non-residential)**

IC&I Waste (industrial, Commercial, and Institutional) is the waste generated by all non-residential sources in a municipality, and is excluded from the residential waste stream. This includes:

- » Industrial waste, which is generated by manufacturing, and primary and secondary industries, and is managed off-site from the manufacturing operation, and is generally picked up under contract by the private sector;
- » Commercial waste is generated by commercial operations such as shopping centres, offices, etc. Some commercial waste (from small street-front stores, etc.) may be picked up by the municipal collection system along with the residential waste;
- » Institutional waste is generated by institutional facilities such as schools, hospitals, government facilities, senior homes, universities, etc. This waste is generally picked up under contract with the private sector.

## **Landfill**

A site, on land, that is used primarily for the disposal of waste materials. The contents of landfills can include garbage which is not processed, and also residual material from processing operations (MRF residues, incinerators ash, organic processing residues, etc).

## **Leaf and yard waste**

Includes any waste collected from a yard or garden such as leaves, grass clippings, plants, tree trimmings and branches.

## **Material Recycling Facility (MRF)**

A facility where materials that are collected for recycling are prepared or processed. The preparation or processing can include sorting, baling, cleaning, crushing, volume reduction and storing until shipment.

## **Metric tonne**

A measure of weight equal to 1,000 kilograms or 2,204 pounds.

## **Non-hazardous waste (garbage)**

Included in this category are materials, products or by-products for which the waste generator has no further use and which are received for disposal at waste disposal facilities or for processing at a waste processing facility.

## **Organic materials**

Materials that are or were once living, such as leaves, grass, yard trimmings, agricultural crop residues, wood waste, and paper and paperboard products or food scraps.

## **Organic processing services**

The breakdown of organic materials through either composting or anaerobic digestion processes.

## **Organic material collection, non-residential**

Collection of organic material, (e.g., food scraps, leaves, grass, wood waste and paper products), from sources such as heavy and light industry, manufacturing, agriculture, warehousing, transportation, retail and wholesale commercial activities, restaurants, offices, educational or recreational facilities, health and other service facilities.

## **Organic material collection, residential**

Collection of organic material, (e.g., food scraps, leaves, grass, yard trimmings), from dwellings, including apartment buildings and condominiums. Examples of collection methods are curbside collection, back door pick-up, and automated collection.

## **Plastic – PET (1)**

Polyethylene Terephthalate, commonly abbreviated as PET or PETE, is a polymer resin of the polyester family. PET is identified by the number 1 recycling symbol. Commonly recyclable PET materials include 2 litre soda bottles, water bottles, cooking oil bottles, peanut butter jars.

## **Plastic – HDPE (2)**

High Density Polyethylene is a polyethylene thermoplastic made from petroleum. HDPE is identified by the number 2 recycling symbol. Some commonly recycled HDPE materials include detergent bottles, milk jugs, and grocery bags.

## **Plastic - All others (3-7)**

Polyvinyl Chloride – PVC (3), Low Density Polyethylene – LDPE (4), Polypropylene – PP (5), Polystyrene – PS (6), Other (7).

Common uses: (3) plastic pipes, outdoor furniture, shrink wrap, water bottles, (4) dry cleaning bags, produce bags, trash can liners, (5) aerosol caps, drinking straws, (6) packaging pellets, Styrofoam cups (7) food containers.

## **Post closure and maintenance fund (landfills)**

This includes money set aside for the eventual costs associated with the maintenance and rehabilitation of a landfill after it closes. Such a fund is often called a landfill reserve fund.

## **Processing residue**

Material that was originally diverted from disposal either to be recycled or composted, but was disposed due to the unsuitability of the material for recycling/composting (i.e. the type of material could not be processed or it was contaminated).

## **Quantity of materials entering the facility**

The quantity, by weight, of unprocessed materials (e.g., organics) entering a processing facility (e.g., a central composting facility).

## **Recyclable material**

Any material that has reached the end of its useful life in the form or purpose for which it was initially made and that can be recycled into a material that has value as a feedstock in another production process.

## **Recyclable material collection services, non-residential (non-hazardous)**

Collection of non-hazardous recyclable material (e.g., cardboard, paper, plastics, metals, glass), from source, such as heavy and light industry, manufacturing, warehousing, transportation, retail and wholesale commercial activities, restaurants, offices, educational or recreational facilities, health and other service facilities. Recyclable material may be taken to an intermediate site such as a material recycling facility or transfer facility.

## **Recyclable material collection, residential (non-hazardous)**

Collection of non-hazardous recyclable material e.g., cardboard, paper, plastics, metals, glass, from dwellings, including apartment buildings and condominiums. Examples of collection methods are curbside collection, back door pick-up, and automated collection. Recyclable material may be taken to an intermediate site such as a material recovery facility or transfer facility. Recyclable material may be collected on a regular or flexible schedule.

## **Recycling**

Recycling is defined as the process whereby a recyclable material (e.g., glass, metal, plastic, paper) is diverted from

the waste stream in order to be remanufactured into a new product, or is used as a raw material substitute.

## **Recycling centre / drop off depot**

A facility or site where the public can bring materials for recycling or re-use. In some cases, household hazardous waste or special waste is accepted at these sites.

## **Recycling services (non-hazardous waste)**

Recovery of recyclable material (e.g., cardboard, paper, plastics, metals, glass), from the non-hazardous waste stream by baling, cleaning, sorting, reducing volume and preparing for shipment. Generally these activities take place in a material recycling facility (MRF).

## **Residential waste**

Residential waste refers to waste from primary and seasonal dwellings, which includes all single family, multi-family, high rise and low rise residences.

It includes:

- » The waste picked up by the municipality, (either using its own staff, or through contracted companies), and
- » The waste from residential sources which is self-hauled to depots, transfer stations and landfills.

## **Residual waste processing**

An operation in which the physical or chemical properties of non-recyclable or compostable wastes are changed to reduce size and/or volume. Examples of waste processing are shredding, compaction & transformation.

## **Scrap metal**

Any metal cutting or reject of a manufacturing operation, which may be suitable for recycling.

## **Sources of materials**

Refers to the sources of generation of the waste or recyclable material. These sources are classified as residential, industrial, commercial and institutional (IC&I) and construction, renovation and demolition. It is sometimes difficult to ascertain the source of a given material because of lack of tracking or complex collection arrangements (e.g., when collection is contracted out or when collection vehicles pick up materials from a mix of sources on their routes).

## Source separated organic materials (SSO)

Source separation of organics is the setting aside of organic waste materials at their point of generation (the home, office, or other place of business) by the generator. Examples of SSO materials are food scraps, soiled paper packaging such as ice cream boxes, muffin paper, flour and sugar bags, paper coffee cups and paper plates

## Stabilized landfill

A stabilized landfill is similar to a conventional landfill except waste is screened and then mechanically and biologically treated prior to being landfilled. Screening of waste (usually from source separated collection programs) removes recyclable materials as well as other materials that should not be landfilled. The remainder is composted and then landfilled. This kind of waste treatment prior to landfilling reduces the production of landfill gas and leachate.

## Tipping fees (disposal fees)

Also known as disposal fees, these are fees that are paid to the owner, lessor or operator of a landfill for the right to dispose of waste within that landfill. These fees can be assessed on a weight-based (e.g., per tonne), volume-based (per cubic metre) or per item basis (fees that differ according to the type of material being disposed, such as white goods or tires). Tipping fees may also be paid to the owner or operator of recycling facilities, organic material processing facilities, or waste processing facilities.

## Transfer station (non-hazardous)

A facility at which wastes transported by vehicles involved in collection are transferred to other vehicles that will transport the wastes to a disposal (landfill or incinerator) or recycling facility.

## Waste collection services, non-residential (non-hazardous)

Collection of non-hazardous waste, garbage, rubbish, refuse, trash and commingled material from sources such as heavy and light industry, manufacturing, agriculture, warehousing,

transportation, retail and wholesale commercial activities, restaurants, offices, educational or recreational facilities, health and other service facilities. Waste may be taken to an intermediate site or to a final disposal site.

## Waste collection services, residential (non-hazardous)

Collection of non-hazardous waste, garbage, rubbish, refuse, trash and commingled material from dwellings, including apartment buildings and condominiums. Examples of collection methods are curbside collection, back door pick-up, and automated collection. Waste may be taken to an intermediate site or to a final disposal site.

## Waste hauling or transportation

The transportation of waste from one site or geographic area to another. This excludes the collection of waste and is limited to activities such as waste exporting or the shipping of wastes from transfer station to disposal or processing facility.

## White goods

Includes metal items such as: stoves, fridges, freezers, air conditioners, dehumidifiers, washers, dryers, hot water tanks, metal sinks, microwaves, and various other metal items.

## Wood waste

The primary constituents of wood waste are used lumber, trim, shipping pallets, trees, branches, and other wood debris from construction and demolition clearing and grubbing activities. It includes; dimensional lumber, plywood, particle board & fibre board, pallets/skids, crating, wood fencing, pressure treated lumber, wood shingles, wooden doors, creosoted wood products, demolition wood waste, painted wood.

## Conversions

One cubic yard = 0.764 cubic metres

1 kilogram = 2.2 pounds

1 metric tonne = 1000kg = 2200 pounds