



Item 16F0002XIE

Environment Statistics Program

# Waste Management Industry Survey Government Sector 1994



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**Waste Management Industry Survey: Government Sector, 1994**

Statistics Canada – Item 16F0002XIE

July, 1998  
Ottawa

**How to Obtain More Information**

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## Symbols

The following are standard symbols used in Statistics Canada publications:

- .. figures not available
- ... figures not appropriate or applicable
- nil or zero
- amount too small to be expressed
- x confidential to meet secrecy requirement of the *Statistics Act*

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## Preface

This report presents the results of the 1994 *Waste Management Industry Survey: Government Sector*.

This survey gathered information on the waste management services provided by governments in 1994. These services included the collection and transportation of waste and of materials destined for recycling, the operation of non-hazardous waste disposal facilities and the operation of transfer stations.

The 1994 *Waste Management Industry Survey: Government Sector* is one component of several at Statistics Canada that, taken together, will contribute a more complete set of information about waste and waste management than has been available to date.

## Acknowledgements

The contributions of the respondents were critical to the successful completion of the survey and are gratefully acknowledged.

This report was prepared by the Environment Statistics Program - Claude Simard, Director and Cynthia Baumgarten, Assistant Director. Bruce Mitchell, Senior Research Officer, managed the project.

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Ted Lewis



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# 1 The Waste Management Industry: Government Sector

## 1.1 Introduction

The waste management industry provides a number of environmental services to Canadians. These include the collection and transportation of waste and of materials destined for recycling or reuse, the operation of non-hazardous waste disposal facilities, the operation of transfer stations and the treatment and disposal of wastes deemed to be hazardous. Governments across Canada play a major role in this industry, both as operators of waste management services and as users of these services.

The waste management industry is, itself, part of the larger environment industry. The environment industry includes all producers of environmental goods and producers of environmental services. In addition to waste services, the environment industry also covers the production of goods to control waste production, to abate pollution and to manage wastes once produced. It also includes services to remediate the effects of pollution and services to manage other environmental resources such as air and water.

The environment industry is believed to have experienced rapid growth in the past decade and is regarded by many as an industry with the potential to continue that growth into the future.

Waste statistics have an important role in the environmental statistics program of Statistics Canada. One of the program's objectives is to develop a complete set of statistics on waste management as part of a broader initiative to measure the activities of the environment industry.

An important element of this work is the *Waste Management Industry Survey: Government Sector*. The 1994 *Waste Management Industry Survey: Government Sector* gathered information on the expenditures and number of employees of government organizations that provided waste management services in 1994. Also collected was information on the types of services these administrations provided and the amounts and types of materials that they handled in their waste management activities.

In 1994, government organizations spent \$1.15 billion on waste management operations. Fifty percent of this amount was spent as payments to contracted waste management firms for services rendered. The government organizations included in the survey directly employed 6,720 persons in waste management service activities.

## 1.2 Other components of the waste management industry

The information presented in this report covers only the *government services sector* of this industry.

The waste management industry also has a component operated by the business sector. Much of Canada's waste collection, particularly from the non-residential sector, is conducted by the business sector. The business sector also operates a number of disposal facilities, including most of those that handle hazardous wastes or wastes requiring other special disposal. Statistics Canada conducts a survey of business sector waste management services titled the *Waste Management Industry Survey: Business Sector*. The results from this survey complement the information from the *Waste Management Industry Survey: Government Sector* by providing a relatively complete picture of waste management services in Canada.

Some waste materials are collected for resale. Collecting and preparing materials for the purpose of resale is not the primary activity of the waste management service industry but is instead deemed to be a wholesale trade activity. Companies in this industry derive their revenue primarily from the resale of previously used materials. This group includes scrap metal dealers as well as many other recyclers. Information on this industry is collected through the *Survey of Wholesale Trade*. For 1994, the wholesale trade of previously used materials generated total revenues of \$2.49 billion.

Wastes may also be managed directly by the generator. For example, wastes created by a pulp and paper mill or a smelter may be managed by the company on site or in other company run-facilities without the assistance of separate service providers. To date, Statistics Canada has not attempted to measure the amounts of wastes managed by the generator. Some information in this regard may be available where particular wastes are subject to reporting requirements as part of specific provincial or federal regulatory programs.

While Statistics Canada does not collect information on the amounts of waste managed directly by the generating business, the agency does collect information on expenditures that businesses incur to manage these wastes. (*Survey of Environmental Protection Expenditures*, Statistics Canada, 1996). Preliminary estimates indicate that, in 1995, businesses spent \$438 million on waste management and sewerage services.

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Households often manage some waste materials themselves. Many households, for example, now have backyard composters that handle at least a portion of home and garden organic wastes. Statistics Canada collected information on the number of households with composting in the 1994 *Household Environment Survey* (Statistics Canada, 1995).

### 1.3 Defining waste and its components

Waste management activities take many different forms and involve many different participants. This presents challenges when trying to prepare an integrated picture of activities, including the total materials managed.

One common thread is that all the materials handled are unwanted by their producer. The unwanted materials may be by-products of some sort of 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 or a package that has been opened and emptied of its contents.

Concepts and definitions in the waste management area are still evolving. The most common source of difficulty is in classifying waste. Strategies to compile waste statistics reflect the specific needs of statistical and analytical projects: by type (municipal solid waste, hazardous waste); by generator (residential, industrial); by generating activity (construction and demolition) as well as by material. The differences in the terminology that the various respondents use can create many operational difficulties. In conducting the 1994 *Waste Management Industry Survey: Government Sector*, valuable suggestions were made on how to refine the classification and this has been taken into account while developing the 1996 edition of the questionnaire.

### 1.4 Definitions

#### Construction and demolition waste

Includes (waste) material from residential and commercial low-rise construction, residential high-rise construction, commercial construction, demolition, renovation and land clearing.

#### Institutional, commercial and industrial waste

Includes waste material from sources 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.

#### Materials for recycling or reuse

Materials managed for processing into new products or cleaned and treated for reuse by other than the generator.

#### Municipal solid waste

Includes solid waste produced by the residential, industrial, commercial, institutional sectors, and excludes construction and demolition waste.

#### Preparing materials for recycling or reuse

Includes sorting, cleaning and reducing volume of recyclable or reusable materials.

#### Residential waste

Includes materials disposed from residential dwellings, including apartment buildings and condominiums.

#### Waste

Includes all materials unwanted by their generator. This includes all materials that are intended for recycling, treatment or disposal that are removed without, or with only nominal, remuneration to the waste generator.

#### Waste disposal facility

This is an establishment for the handling of solid waste of which no further use is to be made. Waste disposal facility options are landfilling and incineration.

#### Waste for disposal

Includes any material, product or by-product for which the waste generator has no further use and which is collected and sent for disposal at waste disposal facilities (excludes materials destined for recycling).



## 2 Survey Results

### 2.1 Operating expenditures

The operating expenditures on waste management services of municipalities and other government organizations totaled \$1.15 billion in 1994 (Table 2.1).

Governments in Ontario reported operating expenditures of \$468 million, 41 percent of the national total. Governments in Quebec accounted for an additional 28 percent, while those in British Columbia contributed a further 14 percent.

Nationally, fifty percent of operating expenditures were payments made to contracted waste management firms for services rendered. Regionally, a large proportion of expenditures made by governments in Quebec, New Brunswick and Ontario were directed to contracted services. In contrast, over three-quarters of the government expenditures on waste management in Manitoba, Newfoundland, British Columbia, Nova Scotia, and Saskatchewan paid for programs operated by the government's own employees. Nevertheless, actual expenditures on programs run with own employees were highest in Ontario (\$239 million).

Table 2.1  
**Operating Expenditures<sup>1</sup>, 1994**

Province/Territory	Operating expenditures thousand dollars	Service provider <sup>2</sup>	
		Own employees <sup>3</sup> percent	Contractors <sup>3</sup>
Newfoundland	10 969	81	19
Prince Edward Island	928	x	x
Nova Scotia	29 007	80	20
New Brunswick	14 609	49	51
Quebec	325 685	19	81
Ontario	468 225	51	49
Manitoba	31 423	86	14
Saskatchewan	18 418	79	21
Alberta	78 094	66	34
British Columbia	165 820	80	20
Yukon	916	x	x
Northwest Territories	4 132	x	x
<b>Canada</b>	<b>1 148 226</b>	<b>50</b>	<b>50</b>

**Notes:**

1. Operating expenditure figures cover surveyed municipalities as well as estimates for municipalities that were not surveyed. Operating expenditures cover: collection and transport of waste for disposal, disposal facilities, recycling and other waste management.

2. Columns indicate percentage of operating expenditures spent on programs delivered by own employees versus payments to contractors for services.

3. Governments in Quebec were not surveyed on this item. Figures for Quebec are estimates from other sources.

X Figures suppressed to meet the confidentiality requirements of the Statistics Act.

**Source:**

Statistics Canada, Environment Statistics Program and Public Institutions Division

Classified by activity, the operation of disposal facilities received the largest portion of government waste disposal expenditures (\$455 million). Forty percent of total operating expenditures were devoted to disposal facility operation, compared to 36 percent for collection and transport of materials and 16 percent for recycling.

A greater proportion of operating expenditures on disposal facilities was spent on programs operated by own employees (59 percent) than on contract services for this item (41 percent). On the other hand, more was spent on contractor services for collection and transport and for recycling than for the operation of these programs with own employees. Fifty-five percent of collection and transport operating expenditures and 62 percent of recycling operating expenditures paid for contractor services.

Table 2.2  
**Operating Expenditures<sup>1</sup> by Activity, 1994**

Activity <sup>2</sup>	Operating expenditures thousand dollars	Service provider <sup>3</sup>	
		Own employees percent	Contractors
Collection and transport	415 428	45	55
Disposal facilities	455 157	59	41
Recycling	185 783	38	62
Other	91 858	50	50
<b>Total</b>	<b>1 148 226</b>	<b>50</b>	<b>50</b>

**Notes:**

1. Operating expenditure figures cover surveyed municipalities, as well as estimates for municipalities that were not surveyed.
2. Governments in Quebec were not surveyed on expenditures for specific waste management activities. This table incorporates estimates derived from other sources.
3. Columns indicate percentage of operating expenditures spent on programs delivered by own employees versus payments to contractors for services.

**Source:**

Statistics Canada, Environment Statistics Program and Public Institutions Division

## 2.2 Capital expenditures

Governments in the waste management industry made capital expenditures of about \$100 million in 1994 on waste management related items. The majority of this sum was devoted to expenditures on

disposal facilities (76 percent). This includes, for example, spending to build new landfills, to expand facilities, and to purchase new vehicles and other machinery and equipment.

Table 2.3  
**Capital Expenditures<sup>1</sup> by Activity, 1994**

Activity	Expenditures <sup>2</sup> thousand dollars
Collection	5 452
Disposal facilities	76 362
Recycling	12 776
Other	5 669
<b>Total</b>	<b>100 259</b>

**Notes:**

1. Capital expenditure figures cover surveyed municipalities (populations 5,000 or greater). No estimate has been made for municipalities with less than 5,000 persons.
2. Governments in Quebec were not surveyed on expenditures for specific waste management activities. This table incorporates estimates derived from other sources.

**Source:**

Statistics Canada, Environment Statistics Program

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## 2.3 Employment

Table 2.4 presents employment information. Governments employed 6,720 persons in waste management services. Governments in Ontario employed the largest share. Forty percent of all government waste management workers were employed by Ontario governments.

Table 2.4  
**Employment<sup>1</sup>, 1994**

<u>Province/Territory</u>	<u>Employment</u> <u>persons</u>
Newfoundland	75
Prince Edward Island	x
Nova Scotia	180
New Brunswick	140
Quebec <sup>2</sup>	1 482
Ontario	2 698
Manitoba	258
Saskatchewan	152
Alberta	747
British Columbia	950
Yukon	x
Northwest Territories	x
<b>Canada</b>	<b>6 720</b>

**Notes:**

1. Includes full-time and part-time employees working in the waste management activities of surveyed municipalities (populations 5,000 or greater). No estimate has been made for municipalities with less than 5,000 persons.
  2. Governments in Quebec were not surveyed on waste management employment. Figure is an estimate from other sources.
- X Figures suppressed to meet the confidentiality requirements of the Statistics Act.

**Source:**

Statistics Canada, Environment Statistics Program

## 2.4 Disposal activity for business and government sectors combined

Table 2.5 presents information on the amounts of non-hazardous waste disposed in both government operated and privately operated waste disposal facilities for 1994. These data were derived from the 1994 editions of the *Waste Management Industry Survey: Business Sector* and the *Waste Management Industry Survey: Government Sector*. Canadian disposed about 21.5 million tonnes of waste in public and private waste disposal facilities.

This amounts to 734 kilograms per person. However, it should be noted that the wastes included come from many sources including residences, institutions, commercial establishments and industries.

Also, the figures do not include hazardous wastes or any wastes that waste generators might manage themselves (for example on a factory property).

Ontario disposed of the largest share of the national waste total (34 percent). However, Ontario accounts for about 37 percent of Canada's population, placing this province below the national disposal rate average. Saskatchewan had the highest per capita disposal rate.

Table 2.5  
**Disposal of Waste<sup>1</sup> by Province/Territory, 1994**

Province/Territory	Waste disposed		1994 population		Waste disposed per capita	
	tonnes		persons		tonnes	
Newfoundland	486 523		581 242		0.84	
Prince Edward Island	x		134 554		x	
Nova Scotia	713 941		933 857		0.76	
New Brunswick	576 102 <sup>2</sup>		757 661		0.76	
Quebec	5 189 400 <sup>2</sup>		7 288 815		0.71	
Ontario	7 350 586		10 937 058		0.67	
Manitoba	951 142		1 129 486		0.84	
Saskatchewan	925 121		1 012 156		0.91	
Alberta	2 329 327		2 715 554		0.86	
British Columbia	2 791 478 <sup>2</sup>		3 670 825		0.76	
Yukon	x		29 658		x	
Northwest Territories	x		64 733		x	
<b>Canada</b>	<b>21 464 714</b>		<b>29 255 599</b>		<b>0.73</b>	

**Notes:**

1. Total amount of waste disposed in public and private waste disposal facilities. Does not include wastes disposed in hazardous waste disposal facilities or wastes managed by the waste generator on site.
  2. Figure is derived from the results of complementary surveys conducted by the provinces.
- X Figures suppressed to meet the confidentiality requirements of the Statistics Act.

**Source:**

Statistics Canada, Environment Statistics Program

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## 3 Survey Design and Methodology

This section describes the design and methodology of the 1994 *Waste Management Industry Survey: Government Sector*. It addresses the following areas: the survey universe, the procedures for data collection, editing, imputation and quality assurance.

### 3.1 Survey universe

The mailing list for the 1994 *Waste Management Industry Survey: Government Sector* was based on the 1994 Local Government Universe from Public Institutions Division. Municipal governments are overwhelmingly the most common types of government managing waste. The Public Institutions Division list was supplemented with the names and addresses of other government bodies from provincial sources. This included, for example, regional waste management commissions and other similar agencies that were involved in the provision of waste management services.

Several provinces also collected data on some aspects of waste management in 1994. As a result, governments in some provinces either were not surveyed or were asked to respond to portions of the questionnaire only. Quebec municipalities, for example, were not surveyed because the province had collected data. In British Columbia and New Brunswick, information was available on the activities of disposal facilities. Respondents in these provinces were sent surveys but were told not to complete the section on disposal facilities as that information was being obtained from an alternative source.

All governments and government agencies on the final list with populations of 5,000 persons and more were included in the survey frame. A total of 524 surveys were mailed to respondents.

### 3.2 Data collection and processing

Data collection took place during 1997. Survey questionnaires were mailed to the governments and the responses were returned by mail. The surveys were addressed to a contact person who was either responsible for, or had knowledge of, the waste management operations of the government.

Follow-ups by fax and/or telephone were carried out after the return due date to remind respondents to return their surveys.

Questionnaires were edited in two steps. First, validity edits were conducted to ensure that responses to particular questions fell within a limited range of possible values. These edits were applied primarily to the questions on waste and material quantities but were also used to identify unusual values in the financial sections. A second series of edits, consistency edits, were then applied. These identified instances where the responses in one section of the questionnaire were logically inconsistent with those given in other sections.

Additional follow-up with the governments was carried out to collect missing data and to correct inconsistencies.

Conducting the 1994 *Waste Management Industry Survey: Government Sector* proved to be challenging for several reasons.

First, many local governments use the services of private sector waste management firms. It was essential that both the question structure and particular wording enabled respondents to distinguish between services they provided with their own employees and those which they contracted out. In the processing phase it frequently became necessary to contact respondents to clarify the nature of these relationships.

A second more challenging aspect of the survey related to the way in which groups of municipalities work together to provide waste management services for their residents. In many areas, different tiers of local governments exist and governments in each tier may be involved in aspects of waste service delivery. Many alternative forms of service delivery were identified.

For example:

- 1) A regional government might serve an area within which there are a number of local municipalities.
- 2) The upper tier government might provide the waste services.
- 3) Only the lower tier municipalities might provide services.
- 4) Both tiers might provide different services (one disposal facility operation, the other waste collection, for example).
- 5) Both tiers could be providing the same services to different parts of the region (a lower tier might run a disposal facility for just their municipality with the regional government running a disposal facility for the remainder of the region).
- 6) Municipalities in one or both tiers could act co-operatively through a separate government agency such as a regional waste commission that both collects waste and runs the disposal facility.
- 7) Or, none of the governments in an area could be doing any waste management, leaving provision of waste services strictly to private sector firms. Examples of each of these situations exist in Canada and both the survey vehicle and processing system had to be able to deal with these possibilities.

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Extensive respondent follow-up was required in some cases. Returns for specific geographic areas were frequently processed together in order to build a clear picture of service delivery and to prevent either double counting or inadvertently missing pieces of information.

### 3.3 Data quality

Many factors affect the quality of data produced in a survey. For example, respondents may have made errors in interpreting questions, answers may have been incorrectly entered on the questionnaires, and errors may have been introduced during the data capture or tabulation process. Every effort was made to reduce the occurrence of such errors in this survey. These efforts included a complete verification of keyed data, validity and consistency edits, extensive follow-up, and consultation with selected government departments and industry associations.

New surveys can be subject to problems of incomplete coverage, incorrect classifications, and inconsistencies in working definitions. These problems can be reduced if the survey in question is repeated at regular intervals and with sufficient frequency to develop a representative mailing list. At the same time regular surveying and respondent feedback also play a major role in improving classifications and definitions. Regular surveying also ensures that the respondents become familiar with the definitions used and the type of information required.

Although most governments were very co-operative in answering the survey, some could not provide all the data required in the form in which it was requested. This was especially true for small municipalities responding to questions about the weights of material. Many of these municipalities operate facilities that do not have weigh scales. Therefore exact weights were not available; however many respondents were able to estimate the amounts handled based on the number of trips and the number and size of vehicles used.

Of a total of 524 surveys mailed, 492 responses were ultimately received. Of the 32 for which no response was received, most were out of operation through amalgamations. Among the 492 survey responses, 19 municipal governments indicated that they had no waste management operations. Services were provided either by the private sector or neighbouring municipalities.

Tables 2.1 and 2.2, covering operating expenditures, were produced by reconciling the results of information gathered in the survey and the local government datasets of Public Institutions Division.

Table 2.3, covering capital expenditures, and Table 2.4, covering employment in waste management activities, present the results drawn directly from the survey. Imputation was not performed on these questions because the level of non-response to the survey was

minimal. In addition, alternative information that could have been used as the basis for imputation for the few non-responding units was not available.

Table 2.5, covers the activities of waste disposal facilities run both by governments and by private sector firms. Private sector information on facilities comes from the results of the 1994 *Waste Management Industry Survey: Business Sector*. Additional results from this survey are available under Statistics Canada catalogue number 16F0003XPE. Results from the questions on the two surveys concerning waste amounts disposed were aggregated to eliminate the need to suppress information that would otherwise be confidential under the requirements of the Statistics Act. Information from provincial government sources was used for New Brunswick, British Columbia and Quebec. For other provinces imputation was performed on the survey results to account for the portion of the population in municipalities below the population threshold of this survey (5,000). The residual population outside the survey population was calculated for the purposes of imputation. The populations of small municipalities known to be served by the disposal facilities of surveyed municipalities were then subtracted from this residual population. The resulting rate of imputation was 13 percent.

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## References

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National Accounts and Environment Division

# Local Government Waste Management Survey, 1994

Confidential when completed

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

Si vous préférez recevoir ce questionnaire en français, veuillez cocher

Please correct, if necessary

Local Government Name  
 \_\_\_\_\_

C/O  
 \_\_\_\_\_

Street address  
 \_\_\_\_\_

City  
 \_\_\_\_\_

Province \_\_\_\_\_ Postal code \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

## Please read before completing

### Purpose of the Survey

This survey collects information that will help Canadians understand the role of local governments in waste management, as well as the impact of such activity on Canada's economy and environment. Statistics Canada has already conducted a survey of private waste management for 1994. 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.

### Inquiries

If you require assistance in completing this questionnaire or have any questions regarding the survey, please contact us at:

Telephone: **(call collect)** (613) 951-5348 or (613)951-3791  
 Fax: 613 951-3618

Please return this questionnaire within 20 days of receipt. If you are unable to do so, kindly inform us of the expected completion date.

### Reporting Period

**Report for the calendar year 1994.**

### General Instructions

This survey is intended for the organization responsible for the operation of the waste management programme.

If your organization is an association of municipalities, an upper tier or a special organization with a mandate to manage waste for a number of lower-tier governments then please respond for the municipalities under your jurisdiction. All references in the questionnaire to **your municipality** should be interpreted as all municipalities under your jurisdiction. Please provide a list of member municipalities.

If you represent a lower-tier government and you do not maintain statistics on any of the functions covered by this questionnaire, please tell us who we may contact to obtain this information.

If your organization can only report some of the data required, please tell us who we might contact to obtain the missing information.

There are 4 sections to this survey. In some cases provincial sources will provide the data we require. Please answer all sections of this survey unless we advise you to do otherwise.

If your municipality does not collect data in metric tonnes please convert quantities (truck loads, pounds, etc.) to metric tonnes. Estimate if necessary.

## Definitions

### Municipal solid waste (MSW)

Municipal solid waste includes solid waste produced by the residential (**RES**) and the industrial, commercial and institutional (**ICI**) sectors and excludes construction and demolition waste (**C&D**).

### Industrial, commercial and institutional waste (ICI)

Includes waste material from sources 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.

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

Includes material from residential and commercial low-rise construction, residential high-rise construction, commercial construction, demolition, renovation and land-clearing.

### Residential waste (RES)

Refers to material disposed of from residential dwellings, including apartment buildings and condominiums.

### Waste for disposal

Included in this category is any material, product or by-product for which the waste generator has no further use and which is collected and sent for disposal at waste disposal facilities (this does not include materials destined for recycling).

### Waste disposal facility

An establishment for the handling of solid waste of which no further use is to be made. Waste disposal facilities options are landfilling and incineration.

4-2600-5.1: 1996-01-11 STC/NAD-291-04478

List all municipalities, cities, villages, towns and townships for which you are responding			
City / Municipality	Financial and employment section	Other sections	Postal Code
1.	<input type="checkbox"/>	<input type="checkbox"/>	
2.	<input type="checkbox"/>	<input type="checkbox"/>	
3.	<input type="checkbox"/>	<input type="checkbox"/>	
4.	<input type="checkbox"/>	<input type="checkbox"/>	
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13.	<input type="checkbox"/>	<input type="checkbox"/>	
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15.	<input type="checkbox"/>	<input type="checkbox"/>	

<b>Certification</b>												
<b>I certify that the information contained in this report is correct and complete to the best of my knowledge.</b>												
Signature	Date <table border="1"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">9</td> <td style="width: 20px; height: 20px;">6</td> </tr> </table>							9	6			
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<b>Comments</b>
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**Please return this questionnaire in the envelope provided**  
 If you have any questions, please contact us.  
 Telephone (call collect): (613) 951-5348 or (613) 951-3791  
 Fax: (613) 951-3618

## SECTION 1: Collection and Transportation of Waste for Disposal (1994)

1.1 Does an organized programme to collect and transport waste for disposal exist in your municipality?

<sup>101</sup>  Yes    <sup>102</sup>  No    → If no, skip to Section 2.

1.2 If yes, who collects the waste? (Check all that apply.)

<sup>103</sup>  Your municipality's employees

<sup>104</sup>  Contractor(s) hired by your municipality

<sup>105</sup>  Other (please specify)

<sup>106</sup> \_\_\_\_\_

### Quantity of waste collected and transported

#### Municipal solid waste (MSW)

1.3 What quantity of municipal solid waste did this municipality collect and transport in 1994 from the following sources?

If you cannot distinguish between Residential waste and ICI please provide us the total in boxes 109 and 112.

	by your own employees	by your contractors
	(metric tonnes)	
Residential waste (includes apartments and condominiums)	<sup>107</sup>	<sup>110</sup>
ICI waste	<sup>108</sup>	<sup>111</sup>
<b>Total of Residential waste and ICI</b>	<sup>109</sup>	<sup>112</sup>

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

1.4 Construction and demolition (C&D) waste.

	by your own employees	by your contractors
	(metric tonnes)	
	<sup>113</sup>	<sup>114</sup>

1.5 If C&D waste cannot be distinguished from the total collection stream, check and ensure that Box 109 and 112 represent the total quantity of waste collected.

<sup>115</sup>

#### Exports of waste

1.6 Indicate the following quantities of waste transported by this municipality in 1994

(only include waste transported by your own employees):

	(metric tonnes)	check if unknown quantities
Waste from this jurisdiction transported to another province for disposal.	<sup>116</sup>	<sup>118</sup> <input type="checkbox"/>
Waste from this jurisdiction transported outside Canada for disposal.	<sup>117</sup>	<sup>119</sup> <input type="checkbox"/>

## SECTION 2: Collection and Transportation of Materials for Recycling (1994)

**2.1 Does an organized programme to collect and/or transport materials for recycling exist in your municipality?**

(include curbside and depot collection)

<sup>201</sup>  Yes

<sup>202</sup>  No

**2.2 If no, skip to Section 3, if yes who operates the program ?**

<sup>203</sup>  Your municipality's employees

<sup>204</sup>  Contractor(s) hired by your municipality

<sup>205</sup>  Other (please specify)

<sup>206</sup>

**2.3 What are the recyclables collected?**

(Check all that apply. Specify additional recyclables and report amounts; estimate if necessary) (do not include compostable materials)

	by your own employees	by your contractors
	(metric tonnes)	
Newsprint	<sup>207</sup>	<sup>220</sup>
Fine paper	<sup>208</sup>	<sup>221</sup>
Corrugated cardboard	<sup>209</sup>	<sup>222</sup>
Other paper products(e.g., boxboard, paperboard)	<sup>210</sup>	<sup>223</sup>
<b>Total Paper Products</b>	<sup>211</sup>	<sup>224</sup>
<b>Glass</b>	<sup>212</sup>	<sup>225</sup>
Aluminum	<sup>213</sup>	<sup>226</sup>
Ferrous metals	<sup>214</sup>	<sup>227</sup>
Other metals	<sup>215</sup>	<sup>228</sup>
<b>Total Metals</b>	<sup>216</sup>	<sup>229</sup>
<b>Plastic</b>	<sup>217</sup>	<sup>230</sup>
<b>Total other (textiles, rubber, wood, gypsum, other building materials for example)</b>	<sup>218</sup>	<sup>231</sup>
<b>TOTAL (211+212+216+217+218) and (224+225+229+230+231)</b>	<sup>219</sup>	<sup>232</sup>

### Composting

**2.4 What quantity of yard or kitchen waste did your municipality collect and/or transport for composting in 1994?**

(Include leaf litter, grass clippings, Christmas trees and food waste). (Include curbside and depot collection)

(metric tonnes)

<sup>233</sup>

**Total**

## SECTION 3: Disposal Facilities (1994)

3.1 Did your municipality operate a landfill or incinerator facility in 1994?

301  Yes 302  No

### Quantity of waste disposed by destination and type

#### 3.2.1 Landfill

	(metric tonnes)
Municipal solid waste	303
Construction and demolition waste	304
<b>Total in landfill</b>	<b>305</b>

#### 3.2.2 Incineration

	(metric tonnes)
Municipal solid waste	306
Construction and demolition waste	307
<b>Total incinerated</b>	<b>308</b>

#### 3.2.3 Total disposed

	(metric tonnes)
<b>Total disposed</b>	<b>309</b>

3.3 If the type of waste is unknown, check and report the total quantity of waste in 1994 .  
(to landfill in Box 305; to incineration in box 308)

310

3.4 What is the quantity of waste included in 309 that was imported from another province ?

(metric tonnes)	check box if unknown quantities
311	312 <input type="checkbox"/>

3.5 What is the quantity of waste included in 309 that was imported from another country?

(metric tonnes)	check box if unknown quantities
313	314 <input type="checkbox"/>

## SECTION 4: Financial and Employment (1994)

### Finance

#### 4.1 Revenues for Waste Management Services Not Funded from Tax Revenues.

Revenues from provision of waste management services	401
Revenues from sale of recyclable materials	402
Other non-tax revenues for waste management	403
<b>Total non-tax revenues</b>	<b>404</b>

#### 4.2 Operating Expenditures

*(Include all operating and administrative expenditures related to waste management)*

	in-house expenses	contract expenses
Collection and transport	405	410
Disposal facilities	406	411
Recycling	407	412
Other	408	413
<b>Total operating expenditures</b>	<b>409</b>	<b>414</b>

#### 4.3 Capital Expenditures

Collection	415
Disposal facilities	416
Recycling	417
Other	418
<b>Total capital expenditure</b>	<b>419</b>

### Employment

#### 4.4 Report the usual number of full-time and part-time employees working in the waste management activities of your municipality, according to their primary type of work *(count full-time and part-time workers equally)*:

##### Employees

Operations (e.g., drivers, waste collectors, mechanics, etc.)	420
Administration and management	421
Other, specify	422
<b>Total (sum of Boxes 420 to 422)</b>	<b>423</b>