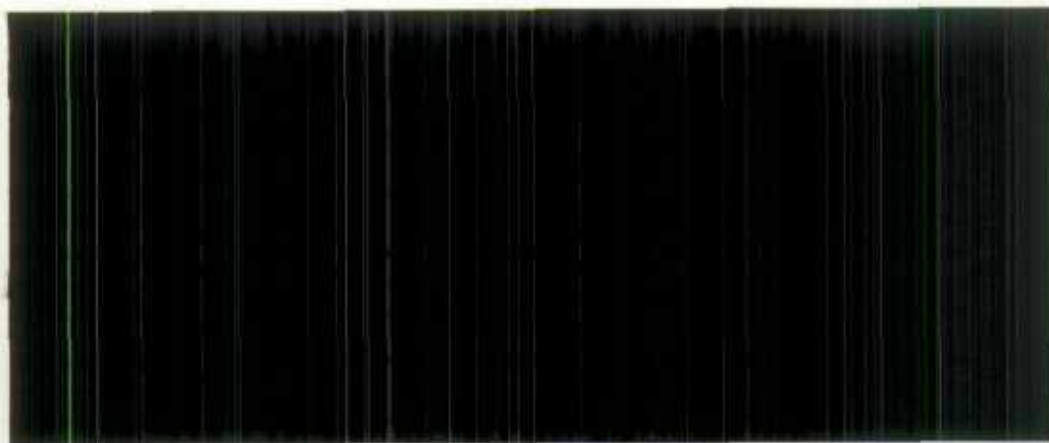




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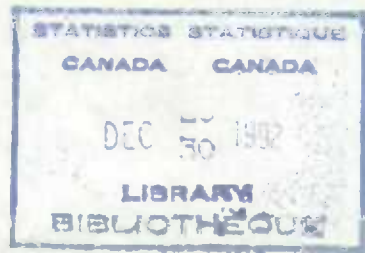


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WASTE MANAGEMENT SURVEY:

A PILOT ENQUIRY

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November 27, 1992

NOTES OF APPRECIATION

Canada owes the success of the statistical system to a long-standing cooperation involving Statistics Canada, the citizens of Canada, its businesses and governments. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Statistics Canada wishes to thank Industry, Science & Technology Canada for providing funds to start this project. It would also like to acknowledge the major contribution made to the Waste Management Survey by Mlle. Catherine Martin while on assignment to Statistics Canada from the Organization for Economic Co-operation & Development, Paris, France.

HIGHLIGHTS

The results of the private sector Waste Management Survey show that, in 1989, the activity generated \$1.1 billion in operating revenues. There were some 650 companies, operating more than 750 establishments.

Private sector waste management revenues represented just 0.17% of 1989 GDP. That is, out of every dollar of Gross Domestic Product generated, 0.17¢ was spent on waste management.

The activity employed almost 10,000 people with wages and salaries of just over \$253 million.

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INTRODUCTION

The Waste Management Survey is a pilot survey of **private sector** establishments engaged in the collection, haulage, disposal and/or recycling of waste products. A second survey, the *Survey of Local Government Waste Management Practices*, has also been conducted to ascertain public sector activity. The two together will provide a more complete picture of waste management in Canada.

As far as is known, these two surveys are pioneering efforts in this field. They are a reflection of Statistics Canada's resolve to continue to introduce new statistical products covering areas of developing public interest.

This survey is considered to be a pilot because the major objective was the development of procedures and expertise relevant for the collection of waste management statistics.

This release provides data on revenue, expenses and employment. Still to come, are data on capital expenditure, quantity information on goods collected, means of disposition, recycling, and export and import of waste. Purchasers of this publication will receive these data, at no additional charge, when they become available.

If you find these statistics valuable (or potentially valuable) you are urged to communicate your views, both positive and negative, to either of the names on the inside cover page. Rest assured that they will be both appreciated and taken into account when future surveys of this nature are being considered.

CONCEPTS

Reference Period

The reference period for this survey was the 1989 fiscal year of respondents. In a number of cases, data were provided for a subsequent fiscal year. Procedures were implemented to adjust such returns to meet the reference period definition.

Universe

The universe for this survey included all private sector establishments primarily engaged in collecting, hauling, disposing and/or recycling waste material (excluding scrap metal dealers) in Canada.

The development of a frame for this universe was hampered by the fact that the

Canadian Standard Industrial Classification (SIC) does not specifically identify a Waste Management Industry. This made it difficult to make effective use of existing statistical tools for frame construction (primarily Statistics Canada's Business Register). Many units which fall in scope for this survey are found in SIC 4999, *Other Utility Industries, not elsewhere classified*, but others are found in industries such as SIC 5919, *Waste Materials, Wholesale*, or in SIC 456 *Truck Transport Industries*. These SICs also include many units which are not in scope for the survey. While it is believed that this survey covers almost all of Waste Management in terms of revenue, it is likely that there is undercount of small establishments.

DEFINITIONS

Collection and haulage	Includes the collection and haulage of both hazardous and non-hazardous waste but excludes recyclable materials that are collected separately.
Disposal	Includes the operation of disposal facilities (i.e. landfills, dumps, incinerators, transfer stations and special facilities for handling hazardous wastes.
Employees, Number of	The average number of employees working for the establishment during the reporting period. The average should have been calculated by summing the number of employees receiving wages or salary on the last working day of each month and dividing the total by number of months in the reporting period (usually 12).
Establishment	The smallest economic (business) unit which produces as homogeneous a set of goods and services as possible, and for which it is possible to obtain data for the value of goods and services produced and for the direct material costs of providing those goods and services.
Operating Revenues	The gross proceeds of the sale of services (after deducting allowances and discounts) plus gains from the sale or exchange of assets as a result of the main activities of the establishment.
Recycling	Includes the collection and sorting of recyclable materials and the hauling of these sorted products to recyclers.
Recycler	A broker or manufacturer handling recyclable materials destined for input into the manufacturing process.

Tipping Fee

Sums payable to the owner or operator of a storage and/or processing facility for accepting waste hauled to the facility.

Wastes

Solid or liquid materials that are collected, transported, and/or disposed of as unwanted by-products of social and economic activity. Wastes may be generated as a by-product of human activity and as the residual of primary, secondary and tertiary economic activities. Residuals recycled or re-used at the place of generation (i.e. the establishment) are excluded. Also excluded are waste materials that are directly discharged into ambient water or air. Waste includes garbage, trash, sludge, dredging spoil, and wrecked or discarded equipment.

DATA QUALITY

The quality of the data derived from this survey is still being assessed. The figure of \$1.1 billion for the waste management "industry" is thought to be reliable. There is less confidence in the reliability of the number of establishments. The validity of estimates of other variables is still under study and an analytical report is planned. [Those interested in the results of the data quality analysis are invited to contact Harry Freedman (address and telephone number is provided on the inside cover page)].

DATA ANALYSIS AND COMMENTARY ON TABLES

Since this is the first time this survey has been conducted, it is not possible to analyze trends or to identify changing patterns over time. It is only possible to compare these results with other potentially associated variables covering the same period.

Table 1 Waste Management and Gross Domestic Product (GDP)

One possible comparison might be between waste management revenues and gross domestic product (on the hypothesis that there is a relationship between economic activity and the generation of waste). Table 1 presents the two variables for 1989. To simplify the comparison a standardized waste management revenue to GDP ratio was calculated such that, if there were a perfect relationship between the two, the ratio would be 1 and if there were no relationship the ratio would be 0 or infinity. British Columbia and Ontario have ratios (0.96 and 1.10, respectively) that demonstrate strong links between the two variables. Alberta's 0.8 and Quebec's 1.32 are less than one would have hypothesized, but still show reasonable correlation, but the other

provinces show weak or no relationship between the two. This variability may reflect the different share of public versus private involvement in the provision of waste management services.

Table 2 Waste Management and Population

Another possible comparison is one between waste management and population (on the hypothesis that there is a relationship between the number of people and the quantity of waste generated and therefore, between the revenue garnered by the private sector waste management sector). Table 2 brings together data from the Waste Management Survey and the 1991 Census of Population. Operating Revenue figures are compared with Total Population, Population living in CMA/CA (Census Metropolitan Areas/Census Agglomerations [an urbanization indicator]), Total Households and Total Families. British Columbia shows a high relationship between operating revenue and all the population indicators: population(0.95), families(0.95), households(0.93), and urban population(0.87). Alberta provides the next strongest ratios (0.87, 0.90, 0.90, 0.90, respectively) followed by Quebec (1.20, 1.19, 1.16 and 1.20, respectively) and Ontario (1.25, 1.25, 1.28, 1.15, respectively). All other provinces show a weak relationship.

Table 3 Financial Information

The statistics found in Table 3 are derived from responses to Section B of the questionnaire (see Appendix). Private waste management establishments generated operating revenues of \$1.1 billion against expenses of \$952 million, generating a profit of \$167 million, or 15% of revenue.

There was some variation among the provinces with Alberta showing the highest margin (19%) and New Brunswick, the lowest (10%).

Tables 4, 5 and 6 Source of Revenue

In Section C of the questionnaire, respondents were requested to estimate the percentage of their operating revenue received from the six waste management activities. The statistics provided in Tables 4, 5 and 6 were dollar conversions derived by multiplying the percentages in Section C by the operating revenue in Section B.

Clearly the major revenue-generating activity is the collection and hauling away of waste. Some \$805 million or 72% of the \$1.1 billion is accounted for by this function. Disposal accounted for the bulk of the remaining revenue, some \$234 million or 21%.

Recycling is a distant third activity. There are two recycling columns in these tables.

The first labelled, *Recycling*, represents the subsidies provided to waste management companies for collection and special handling/sorting. The second, *Recycled Goods Sales*, represents the revenues received from selling the recycled goods. Although presented separately in the tables, the comments which follow apply to the sum of the two.

Recycling as an activity was in its infancy in 1989 so it is not surprising that it accounted for only \$23 million or 2%.

Table 4 provides a provincial dimension. Newfoundland stands out with almost an equal split between collection and haulage and disposal. Most of the remaining provinces have similar distributions although Saskatchewan, Nova Scotia and Manitoba have very low disposal shares (13%).

Recycling as a source of revenue was largest in Ontario at 3.4% of revenue, followed by Alberta with 2.3% and Saskatchewan and Nova Scotia with 2%. All the rest were below the national average of 2%.

Table 5 provides a size dimension. The 759 establishments were aggregated to the company level, where size characterization is more meaningful (the multi-establishment companies had establishments in each size class). There were four multi-establishment companies all of which had operations in more than one province. The remaining companies operated in only one province and were mainly single-establishment firms. The 27 large companies, defined as those with operating revenue of \$5 million and over, earned 71% of industry revenue. The medium-sized firms, defined as those with revenues between \$1.0 and \$4.9 million, earned an additional 19%, so that the two together, although only representing 20% of the firms, earned 90% of the revenue. It is interesting to note that the medium-sized companies had a much larger proportion of their revenue from recycling (6%) than any of the other classes [More than double that of the very small class (3%), the next largest].

Table 6 provides a grouping of establishments according to their main activity (i.e. the one in which an establishment is primarily engaged). Not surprisingly, the overwhelming majority of establishments, some 87%, were in collection & haulage (45% in collection & haulage only and an additional 42% in both collection & haulage and disposal); almost 10% were in disposal; and 4% were in recycling. Revenues are skewed with those engaged in *both* receiving 58% which with the 35% going to collection & haulage gives them 94%¹ of operating revenue.

Tables 7 & 8 Expenses

Tables 7 and 8 provide a means of analyzing waste management expenses; Table 7

¹ $58.4 + 35.4 = 93.8$ or 94%

by looking at size categories and Table 8 by looking at principal activity. Overall, the largest expenditure category was other expenses, followed by wages and then disposal (tipping) fees.

Table 7b is interesting in that it shows that the relative importance of these expense categories to the profitability varied significantly by size of company. For large companies the order was other expenses (24%), tipping fees (22%) and wages (20%). For medium-sized companies it was wages (27%), tipping fees (23%) and other expenses (18%). For small and very small it was wages (31% and 35%, respectively), other expenses (26% and 25%, respectively), tipping fees were in third place for small (15%) but supplies were in third (11%) for very small.

Table 8 also provides some interesting perspectives. Establishments primarily engaged in collection and haulage had wages as the largest expenditure (30%), followed by tipping fees (26%) and supplies (20%). Those engaged primarily in disposal also had wages as their largest expenditure (31%), followed by supplies and other expenses (both at 26%). Integrated collection and disposal establishments, on the other hand, had other expenses as their single largest expenditure (33%), with tipping fees (25%) and wages (24%). The size of the tipping fee expenditure is surprising since, by definition, they operate a disposal facility.

Table 9 Labour

The waste management "industry" paid over \$253 million in wages and salaries. This represented 22.6% of revenues. The average salary was \$25,800 with revenue per employee being \$114,200.

The average salary ranged from just under \$20,000, in New Brunswick and Saskatchewan, to \$30,700 in Manitoba.

The revenue/employee ratio is a simple unit labour productivity ratio. It was highest in Manitoba at 1½ times the Canadian value and lowest in Newfoundland and Saskatchewan at one-half the Canadian value. The standardized wage/revenue ratio is a total labour cost (inverse of productivity) ratio. Newfoundland and Saskatchewan scored highly on this ratio with 1.7 and 1.4 times the Canadian value, respectively. The other provinces were closely clustered around the Canadian value.

When looked at by size of company, gross wages were in the same order as size of firm, much as one might expect. The average salary did show an anomaly in that medium-sized companies had an average salary of \$29,900 while large firms had an lower average of \$26,200. The revenue/employee ratio went steadily down from 1.1 for the large companies to 0.5 for the very small. The wage/revenue ratio went the other way from 0.9 for the large to 1.5 for the very small.

Table 1 Comparison of Waste Management Operating Revenue and GDP, by Province

Province	1989 GDP (\$000,000)	Operating Revenue 1989 (\$000,000)	Operating Revenue/ GDP (%)	Revenue/ GDP Ratio
Newfoundland	8,476	0.91	0.01	0.06
Prince Edward Island	1,897	.	.	0.00
Nova Scotia	16,069	13.19	0.08	0.48
New Brunswick	12,646	4.77	0.04	0.22
Quebec	149,652	339.58	0.23	1.32
Ontario	272,161	517.74	0.19	1.10
Manitoba	22,959	14.42	0.06	0.36
Saskatchewan	19,456	4.62	0.02	0.14
Alberta	65,643	90.96	0.14	0.80
British Columbia	76,921	127.80	0.17	0.96
Yukon & NWT	2,960	.	.	0.00
Canada	648,840	1,119.10	0.17	1.00

Revenue/GDP Ratio = (Operating Revenue/GDP)*(Canada GDP/Canada Operating Revenue)

Source: Statistics Canada Provincial Economic Accounts: Annual Estimates, 1986-1990 (Cat. No. 13-213) Table 1 March 1992

Table 2 Comparison of Waste Management Operating Revenue and 1991 Census of Population

Province	Operating Revenue (\$000)	Population				Families Total		Private Households Total	
		Total		CMA/CA		Total		Total	
		(000)	Ratio	(000)	Ratio	(000)	Ratio	(000)	Ratio
Newfoundland	914	568.5	0.04	253.4	0.07	150.7	0.04	174.5	0.05
Prince Edward Island	.	129.8	.	72.7	.	33.9	.	44.5	.
Nova Scotia	13,193	899.9	0.36	543.4	0.46	244.6	0.35	324.4	0.37
New Brunswick	4,773	723.9	0.16	376.5	0.24	198.0	0.16	253.7	0.17
Quebec	339,581	6,896.0	1.20	5,327.5	1.20	1,883.2	1.19	2,634.3	1.16
Ontario	517,742	10,084.9	1.25	8,495.6	1.15	2,726.7	1.25	3,638.4	1.28
Manitoba	14,417	1,091.9	0.32	729.0	0.37	285.9	0.33	405.1	0.32
Saskatchewan	4,624	988.9	0.11	558.1	0.16	257.6	0.12	363.1	0.11
Alberta	90,957	2,545.6	0.87	1,901.6	0.90	668.0	0.90	910.4	0.90
British Columbia	127,804	3,282.1	0.95	2,776.4	0.87	887.7	0.95	1,243.9	0.93
Yukon & NWT	.	85.4	.	33.1	.	7,117.7	.	26.0	.
Canada	1,119,100	27,296.9	1.00	21,067.3	1.00	14,454.1	1.00	10,079.5	1.00

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Ratio = (Operating Revenue/variable in column immediately left)*(Canada Total of variable in column immediately left/Canada Total of Operating Revenue)

Source: 1991 Census of Canada, Population and Dwelling Counts (Cat. No. 93-301), and Dwellings and Households (Cat. No. 93-311)

Table 3a Financial Information, by Province, 1989

Province	Number of Establishments	Operating Revenue (\$000)	Expenses (\$000)					
			Total	Tipping Fees	Fuel & Electricity	Other Materials	Salaries & Wages	Other Expenses
Newfoundland	28	914	757	16	98	82	353	208
Prince Edward Island	5	x	x	x	x	x	x	x
Nova Scotia	45	13,193	11,571	2,089	754	1,864	3,221	3,643
New Brunswick	24	4,773	4,305	265	311	1,628	1,319	782
Quebec	207	339,581	284,149	55,277	14,956	64,103	83,317	66,496
Ontario	222	517,742	448,828	135,156	18,541	65,701	109,979	119,451
Manitoba	19	14417	12067	3059	779	837	2668	4724
Saskatchewan	23	4624	4110	555	401	442	1494	1218
Alberta	63	90957	73451	12738	3641	6467	21097	29508
British Columbia	112	127,804	107,909	28,141	4,778	15,067	27,369	32,554
Yukon & NWT	11	x	x	x	x	x	x	x
Canada	759	1,119,100	951,981	237,339	44,665	156,965	253,072	259,940

Table 3b Expenses as a Per Cent of Operating Revenue, by Province, 1989

Province	Number of Establishments	Operating Revenue (\$000)	Expense/Operating Revenue (%)					
			Total	Tipping Fees	Fuel & Electricity	Other Materials	Salaries & Wages	Other Expenses
Newfoundland	28	914	82.8	1.8	10.7	9.0	38.6	22.8
Prince Edward Island	5	x	x	x	x	x	x	x
Nova Scotia	45	13,193	87.7	15.8	5.7	14.1	24.4	27.6
New Brunswick	24	4,773	90.2	5.6	6.5	34.1	27.6	16.4
Quebec	207	339,581	83.7	16.3	4.4	18.9	24.5	19.6
Ontario	222	517,742	86.7	26.1	3.6	12.7	21.2	23.1
Manitoba	19	14,417	83.7	21.2	5.4	5.8	18.5	32.8
Saskatchewan	23	4,624	88.9	12.0	8.7	9.6	32.3	26.3
Alberta	63	90,957	80.8	14.0	4.0	7.1	23.2	32.4
British Columbia	112	127,804	84.4	22.0	3.7	11.8	21.4	25.5
Yukon & NWT	11	x	x	x	x	x	x	x
Canada	759	1,119,100	85.1	21.2	4.0	14.0	22.6	23.2

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Table 4a Source of Revenue, by Province, 1989

Province	Number of Establishments	Revenue (\$000)						
		Total	Collection & Haulage	Disposal	Recycling	Recycled Goods Sales	Sales of Energy	Sales, Other
Newfoundland	28	914	419	428	13	1	-	53
Prince Edward Island	5	x	x	x	x	x	x	x
Nova Scotia	45	13,193	10,752	1,756	228	33	50	374
New Brunswick	24	4,773	3,850	839	25	5	1	53
Quebec	207	339,581	237,549	76,892	1,088	288	104	23,660
Ontario	222	517,742	364,900	110,022	13,587	4,100	602	24,531
Manitoba	19	14417	12204	1945	117	15	89	47
Saskatchewan	23	4624	3723	589	86	3	-	223
Alberta	63	90957	70110	15933	1974	120	215	2605
British Columbia	112	127,804	97,257	25,099	1,322	131	148	3,847
Yukon & NWT	11	x	x	x	x	x	x	x
Canada	759	1,119,100	804,751	233,799	18,444	4,811	1,209	56,086

Table 4b Source of Revenue by Province, 1989, Percentage Distribution

Province	Number of Establishments	Revenue (%)						
		Total	Collection & Haulage	Disposal	Recycling	Recycled Goods Sales	Sales of Energy	Other Sales
Newfoundland	28	100.0	45.8	46.8	1.4	0.1	-	5.8
Prince Edward Island	5	x	x	x	x	x	x	x
Nova Scotia	45	100.0	81.5	13.3	1.7	0.3	0.4	2.8
New Brunswick	24	100.0	80.7	17.6	0.5	0.1	--	1.1
Quebec	207	100.0	70.0	22.6	0.3	0.1	--	7.0
Ontario	222	100.0	70.5	21.3	2.6	0.8	0.1	4.7
Manitoba	19	100.0	84.7	13.5	0.8	0.1	0.6	0.3
Saskatchewan	23	100.0	80.5	12.7	1.9	0.1	-	4.8
Alberta	63	100.0	77.1	17.5	2.2	0.1	0.2	2.9
British Columbia	112	100.0	76.1	19.6	1.0	0.1	0.1	3.0
Yukon & NWT	11	x	x	x	x	x	x	x
Canada	759	100.0	71.9	20.9	1.6	0.4	0.1	5.0

* Confidential to meet the secrecy requirements of the Statistics Act

- Nil or zero

--Amount too small to be expressed

Note: Totals may not add due to rounding

Table 5a Source of Revenue, by Company Size Group, 1989

Company Size Group	Number of Companies	Revenue (\$000)						
		Total	Collection & Haulage	Disposal	Recycling	Recycled Goods Sales	Sales of Energy	Other Sales
Large	27	793,350	590,712	148,802	7,894	304	1,209	44,429
Medium	100	209,265	131,273	57,518	8,161	4,099	-	8,214
Small	100	67,129	47,278	16,258	1,098	251	-	2,244
Very Small	416	49,356	35,488	11,221	1,291	157	-	1,199
Total	643	1,119,100	804,751	233,799	18,444	4,811	1,209	56,086

Table 5b Percentage Distribution of Source of Revenue, by Company Size Group, 1989

Company Size Group	Number of Companies	Revenue (%)						
		Total	Collection & Haulage	Disposal	Recycling	Recycled Goods Sales	Sales of Energy	Other Sales
Large	4.2	70.9	74.5	18.8	1.0	--	0.2	5.6
Medium	15.6	18.7	62.7	27.5	3.9	2.0	-	3.9
Small	15.6	6.0	70.4	24.2	1.6	0.4	-	3.3
Very Small	64.7	4.4	71.9	22.7	2.6	0.3	-	2.4
Total	100.0	100.0	71.9	20.9	1.6	0.4	0.1	5.0

Large = Operating Revenue \$5 Million or more

Medium = Operating Revenue between \$1 Million and \$4.9 Million

Small = Operating Revenue between \$0.5 Million and \$0.9 Million

Very Small = Operating Revenue less than \$0.5 Million

- Nil or zero

-- Amount too small to be expressed

Note: Totals may not add due to rounding

Table 6a Source of Revenue, by Principal Activity of Establishments, 1989

Principal Activity	Number of Establishments	Revenue (\$000)						
		Total	Collection & Haulage	Disposal	Recycling	Recycled Goods Sales	Sales of Energy	Other Sales
Collection & Haulage	339	395,799	372,363	-	3,418	3,213	-	16,805
Disposal	74	64,034	-	53,196	902	72	-	9,864
Both	319	653,980	432,388	180,603	11,306	1,526	1,209	26,948
Other	27	5,287	-	-	2,818	-	-	2,469
Total	759	1,119,100	804,751	233,799	18,444	4,811	1,209	56,086

Table 6b Percentage Distribution of Source of Revenue, by Principal Activity of Establishments, 1989

Principal Activity	Number of Establishments	Revenue (%)						
		Total	Collection & Haulage	Disposal	Recycling	Recycled Goods Sales	Sales of Energy	Other Sales
Collection & Haulage	44.7	35.4	94.1	-	0.9	0.8	-	4.2
Disposal	9.7	5.7	-	83.1	1.4	0.1	-	15.4
Both	42.0	58.4	66.1	27.6	1.7	0.2	0.2	4.1
Other	3.6	0.5	-	-	53.3	-	-	46.7
Total	100.0	100.0	71.9	20.9	1.6	0.4	0.1	5.0

- Nil or zero

Note: Totals may not add due to rounding

Table 7a Expenses, by Company Size Group, 1989

Company Size Group	Expenses(\$000)					
	Total	Tipping Fee	Fuel	Supplies	Wages	Other Expenses
Large	665,159	175,968	23,046	114,557	159,618	191,970
Medium	185,051	48,860	11,529	30,414	55,932	38,316
Small	59,211	8,890	5,585	6,810	20,453	17,473
Very Small	42,560	3,621	4,505	5,184	17,069	12,181
Total	951,981	237,339	44,665	156,965	253,072	259,940

Table 7b Expenses as a Percentage of Revenue, by Company Size Group, 1989

Company Size Group	Expenses/Revenue (%)					
	Total	Tipping Fee	Fuel	Supplies	Wages	Other Expenses
Large	83.8	22.2	2.9	14.4	20.1	24.2
Medium	88.4	23.3	5.5	14.5	26.7	18.3
Small	88.2	13.2	8.3	10.1	30.5	26.0
Very Small	86.2	7.3	9.1	10.5	34.6	24.7
Total	85.1	21.2	4.0	14.0	22.6	23.2

Table 7c Percentage Distribution of Expenses, by Company Size Group, 1989

Company Size Group	Expense Component/Total Expenses (%)					
	Total	Tipping Fee	Fuel	Supplies	Wages	Other Expenses
Large	100.0	26.5	3.5	17.2	24.0	28.9
Medium	100.0	26.4	6.2	16.4	30.2	20.7
Small	100.0	15.0	9.4	11.5	34.5	29.5
Very Small	100.0	8.5	10.6	12.2	40.1	28.6
Total	100.0	24.9	4.7	16.5	26.6	27.3

Large = Operating Revenue \$5 Million or more

Medium = Operating Revenue between \$1 Million and \$4.9 Million

Small = Operating Revenue between \$0.5 Million and \$0.9 Million

Very Small = Operating Revenue less than \$0.5 Million

Note: Totals may not add due to rounding

Table 8a Expenses, by Principal Activity of Establishments, 1989

Principal Activity	Number of Establishments	Expenses (\$000)					
		Total	Tipping Fee	Fuel	Supplies	Wages & Salaries	Other Expenses
Collection & Haulage	339	344,138	90,556	17,526	69,804	101,728	64,524
Disposal	74	44,935	5,343	2,449	11,479	14,100	11,564
Both	319	558,087	141,385	24,451	75,031	135,578	181,642
Other	27	4,821	55	239	651	1,666	2,210
Total	759	951,981	237,339	44,665	156,965	253,072	259,940

Table 8b Expenses as a Percentage of Revenue, by Principal Activity of Establishments, 1989

Principal Activity	Number of Establishments	Expense/Revenue (%)					
		Total	Tipping Fee	Fuel	Supplies	Wages & Salaries	Other Expenses
Collection & Haulage	44.7	86.9	22.9	4.4	17.6	25.7	16.3
Disposal	9.7	70.2	8.3	3.8	17.9	22.0	18.1
Both	42.0	85.3	21.6	3.7	11.5	20.7	27.8
Other	3.6	91.2	1.0	4.5	12.3	31.5	41.8
Total	100.0	85.1	21.2	4.0	14.0	22.6	23.2

Table 8c Percentage Distribution of Expenses, by Principal Activity of Establishments, 1989

Principal Activity	Number of Establishments	Expenses Component/Total Expenses (%)					
		Total	Tipping Fee	Fuel	Supplies	Wages & Salaries	Other Expenses
Collection & Haulage	44.7	100.0	26.3	5.1	20.3	29.6	18.7
Disposal	9.7	100.0	11.9	5.5	25.5	31.4	25.7
Both	42.0	100.0	25.3	4.4	13.4	24.3	32.5
Other	3.6	100.0	1.1	5.0	13.5	34.6	45.8
Total	100.0	100.0	24.9	4.7	16.5	26.6	27.3

Note: Totals may not add due to rounding

Table 9a Labour Information, by Province, 1989

Province	Number of Emp- loyees	Operating	Wages &	Average	Revenue/	Revenue/	Wage/Revenue	
		Revenue	Salaries	Salary	Employee	Employee	Ratio	
		(\$000)				Ratio	(%)	Standardized
Newfoundland	17	914	353	20.8	53.8	0.5	38.6	0.8
Prince Edward Island	x	x	x	x	x	x	x	x
Nova Scotia	126	13,193	3,221	25.6	104.7	0.9	24.4	1.0
New Brunswick	67	4,773	1,319	19.7	71.2	0.6	27.6	0.9
Quebec	3,258	339,581	83,317	25.6	104.2	0.9	24.5	1.0
Ontario	4,346	517,742	109,979	25.3	119.1	1.0	21.2	1.0
Manitoba	87	14,417	2,668	30.7	165.7	1.5	18.5	1.1
Saskatchewan	75	4,624	1,494	19.9	61.7	0.5	32.3	0.9
Alberta	721	90,957	21,097	29.3	126.2	1.1	23.2	1.0
British Columbia	1,026	127,804	27,369	26.7	124.6	1.1	21.4	1.0
Yukon & NWT	x	x	x	x	x	x	x	x
Canada	9,796	1,119,100	253,072	25.8	114.2	1.0	22.6	1.0

Table 9b Labour Information, by Company Size Group, 1989

Company Size Group	Number of Employees	Operating Revenue	Wages & Salaries	Average Salary	Revenue/Employee	Revenue/Employee	Wage/Revenue Ratio	
		(\$000)				Ratio	(%)	Standardized
Large	6,084	793,350	159,618	26.2	130.4	1.1	20.1	0.9
Medium	1,868	209,265	55,932	29.9	112.0	1.0	26.7	1.2
Small	897	67,129	20,453	22.8	74.8	0.7	30.5	1.3
Very Small	947	49,356	17,069	18.0	52.1	0.5	34.6	1.5
Total	9,796	1,119,100	253,072	25.8	114.2	1.0	22.6	1.0

Table 9c Labour Information, by Principal Activity of Establishments

Principal Activity	Number of Employees	Operating Revenue	Wages & Salaries	Average Salary	Revenue/Employee	Revenue/Employee Ratio	Wage/Revenue Ratio	
		(\$000)				Ratio	(%)	Standardized
Collection & Haulage	3,809	395,799	101,728	26.7	103.9	0.9	25.7	1.1
Disposal	382	64,034	14,100	36.9	167.6	1.5	22.0	1.0
Both	5,510	653,980	135,578	24.6	118.7	1.0	20.7	0.9
Other	95	5,287	1,666	17.5	55.7	0.5	31.5	1.4
Total	9,796	1,119,100	253,072	25.8	114.2	1.0	22.6	1.0

1 Confidential to meet the secrecy requirements of the Statistics Act

Revenue/Employee Ratio = (Operating Revenue/No. of Employees)*(Canada No. of Employees/Canada Operating Revenues)

Standardized Wage/Revenue Ratio = (Wages & Salaries/Operating Revenue)*(Canada Operating Revenue/Canada Wages & Salaries)

Annual Survey of Waste Management
Industries, 1989

Please quote this number when corresponding with Statistics Canada

Confidential when completed (Keep one copy)

Collected under the authority of the Statistics Act, Revised Statutes
of Canada, 1985, Chapter S19Si vous préférez ce questionnaire en français, veuillez
cocher la case et le retourner à la Section Énergie
Statistique Canada (Ottawa) K1A 0T6 ☐

Please correct any mistakes in label information:

Legal Name: _____

Operations Name: _____

Contact Person: _____

Title: _____

Address: _____

City: _____

Province: _____

Postal Code: _____

SIC 4939

Statistics Canada use only

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Purpose of the Survey

To obtain information on the size and nature of the Waste Management Industry and the role of private sector in this activity. This information helps monitor Canadian economic activity and will provide useful information in the corporate decision-making process.

Confidentiality

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

Important - Please refer to the attached sheet for instructions, definitions, and how to contact Statistics Canada for further information or additional forms.

A. Reporting period

For the purpose of this survey, please report for **your** fiscal year which ended between April 1, 1989 and March 31, 1990.Fiscal year Start: End:
D M Y D M Y

B. Financial information for the reporting period

	Thousands of Canadian dollars
Operating revenues (include tipping fees)	
Less: Tipping fees	
Cost of fuel and electricity	
Cost of all other materials and supplies	
Salaries and wages	
All other expenses	
Net income before tax	

C. Breakdown of operating revenues by activity during the reporting period

Percentage of operating revenues					
Collection and haulage	Disposal	Recycling	Sales to recyclers	Sales of steam or electricity	Sales of all other products and services
%	%	%	%	%	%
					100 %

D. Capital expenditures during the reporting period

	Thousands of Canadian dollars		
	Construction	Machinery and equipment	Total
Capital Expenditures (new)			

5-3100-1090 1-1990-11-27 STC IND-317-04165



E. Employees of this establishment during the reporting period

	Production	Administrative and other	Total
Average numbers employed during reporting period			

F. Haulage operations during the reporting period

Quantity of waste hauled			
	Non-hazardous waste	Hazardous waste	Total
Quantity (tonnes)			

G. Disposal operations during the reporting period (excluding recycling)

Quantity (tonnes) of waste disposed by type and method of disposal			
	Non-hazardous waste	Hazardous waste	Total
Landfill			
Incineration			
Chemical treatment			
Biological treatment			
Other			
Total			

H. Recycling operations by type of material during the reporting period

Quantity (tonnes) by type of material					
Glass	Metal	Plastic	Paper	Other	Total

I. Waste import/export

In this reporting period did this establishment:	No	Yes	If Yes Quantity (tonnes)
Transport Canadian waste for disposal in another country?			
Dispose of foreign waste in Canada?			

J. Comments

Name of company		
Mailing address		Postal code
Name of person responsible for this report (please print)	Official position	Date
Name of person to be contacted in connection with this report		Telephone

THANK YOU



Annual Survey of Waste Management Industries, 1989

Instructions & Definitions

Instructions

- 1^o Target date for completion is February 15, 1991.
- 2^o Please report separately for each establishment. If data by establishment is unavailable, the maximum aggregation allowable is at a provincial level.
- 3^o Units of measure:
 - Thousands of Canadian \$** - for conversion from U.S., please multiply by 1.1842
 - Tonnes** - (1000 KG, to convert from short tons, please multiply by .907)
 - Percentages** - Please use whole numbers (ie. no decimals)
- 4^o For further information or additional forms please contact:
Catherine Martin
Energy Section
TEL: (613) 951-3589
FAX: (613) 951-3522
- 5^o Please forward completed forms in the enclosed return envelope to:
Statistics Canada
Energy Section
Industry Division
Ottawa, Ontario
K1A 0T6

Note: Please retain a copy of each questionnaire for your files.

Definitions

Section A - Reporting Period

- 02.04.88 to 01.04.89 (April 2, 1988 to April 1, 1989) is the earliest acceptable fiscal year.
- 01.04.89 to 31.03.90 (April 1, 1989 to March 31, 1990) is the latest acceptable fiscal year.

Any other fiscal years occurring between these examples (e.g. 01.01.89 to 31.12.89) are of course acceptable.

Section B - Financial Information

- Operating Revenue** - Report the gross proceeds of the sale of services (after deducting allowances and discounts), gains from the sale or exchange of assets as a result of the main activities of your business.
- Tipping Fees** - Sums payable to a public office or a private company for performing a function.
- Salaries and Wages** - Salaries are defined as the remuneration of employees based on annual or monthly rates of pay; wages are based on hourly, daily or weekly rates.

Section C - Breakdown of Operating Revenues

- Collection and Haulage** - Include non-hazardous and hazardous wastes. **Exclude** recyclable materials which are collected separately.
- Recycling** - The collection and sorting of recyclable materials and the hauling of these materials to recyclers (e.g. blue box programs).
- Recycler** - Broker or manufacturer handling recyclable materials destined for input to the manufacturing process.

Section D - Capital Expenditures

Report the gross capital expenditures on new physical assets or installations for use in the operation of your organization, to be sold, leased or rented to others and also including additions, replacements and major alterations. Include all capitalized costs such as architectural, legal and engineering fees as well as work done by your own labour force. Do not deduct receipts from insurance claims or from the sale of own fixed assets or allowances for scrap or trade-in. Also do not deduct capital grants from federal, provincial or municipal aid programs.

1. Construction

Report the total cost of **new** construction carried out during the year, irrespective of the time final payment is made. Include also: (1) the cost of elevators, heating systems, air conditioning, etc. which may be considered an integral part of the building or structure, (2) the cost of land servicing and of site preparation, (3) leasehold and land improvements, (4) "townsite" facilities, such as streets, sewers, stores, schools, (5) "pipelines" oil or gas, include pipe and installation costs, etc. **Exclude expenditures for new residential construction**, for the acquisition of existing assets and for the cost of land acquired.

2. Machinery and Equipment

Report total delivered and installed cost of all **new** machinery and equipment, such as motors, generators, transformers, compressors, pumps, etc. and the delivered cost of movable equipment, such as ships, airplanes, cars, trucks, office furniture and appliances, etc., whether for your own use or rent to others. Include progress payments in the year payment is made and any balance owing, or hold-backs, in the year of acquisition. **Imported** used machinery and equipment is also to be included since it is an addition to the Canadian economy. However, the expenditures on used machinery and equipment purchased in Canada should be excluded.

Section E - Employees

- Employees** - Individuals registered on the establishment's payroll receiving salaries or wages for work performed. The number of employees should be averaged to an annual level by adding the number of employees in the last working day of each month and dividing this sum by the number of months in the reporting period (usually twelve).
- Administrative** - Employees at this establishment engaged primarily in management, financial, marketing, administrative and clerical functions.
- Production** - Skilled or unskilled employees of the establishment primarily involved in the day-to-day operations of the establishment's waste management activities i.e. collection, hauling, disposal, storage, sorting and recycling.

Sections F and G

Wastes are solid or liquid materials that are collected, transported disposed of as unwanted byproducts of economic activity. Wastes may be generated during the extraction of raw materials, during the processing of raw materials to intermediate and final products and during any other human activity. Residuals recycled or reused at the place of generation (i.e. establishment) are excluded. Also excluded are waste materials that are directly discharged into ambient water or air. Wastes include garbage, trash, sludge, dredging spoil and wrecked or discarded equipment.

Hazardous wastes are wastes having one or more of the following characteristics: ignitability, corrosivity, reactivity or toxicity. These wastes pose an actual or potential hazard to human health or living organisms and therefore require special handling and disposal.

Section H - Recycling Operations

Report the disposition of recyclable materials collected, sorted and transported to brokers and manufacturers. Exclude the manufacturing process which uses recyclable materials as inputs.

