

**WDO DATA CALL:  
RECYCLING, ORGANICS AND HOUSEHOLD SPECIAL WASTES  
MUNICIPAL PROGRAM COST ESTIMATES FOR 1999**

**(WDO Project Codes OPT-R1-07, HSW-R2-03 and ORG-R1-14)**

*Submitted to:*

**Waste Diversion Organization  
26 Wellington Street East, Suite 601  
Toronto, Ontario M5E 1S2**

*Submitted by:*

**Earth Tech Canada Inc.**

*In cooperation with:*

**Association of Municipal Recycling Coordinators  
Municipal Waste Integration Network  
Recycling Council of Ontario**

**WDO Note: The information contained in this report was used in the development of the Report to the Minister of the Environment, "Achieving Sustainable Municipal Waste Diversion Programs in Ontario," submitted September, 2000.**

## **WDO Data Call for Recycling, Organics and Household Special Wastes Costs Summary Public Report**

### **Note To The Reader:**

This report presents a summary of the data call process and costs data received under the WDO Data Call For Recycling, Organics and Household Special Wastes Costs Project. Under the terms by which the data was provided to the project, individual municipality's program cost information was not to publicly reported. As a result, the cost figures contained in this report are the aggregated costs; the sum of the individual programs for which data was submitted by the project data call due date of June 28, 2000. At the call due date, data had not provided for a number of programs. Therefore, the aggregated cost figures contained in this report should not be interpreted as being the absolute and total costs for the delivery of municipal recycling, organics or HSW programs in Ontario.

### **Data Collection Process**

The data call process involved collecting specific information on recycling, organics and HSW programs from individual municipalities across the province. The data collection exercise was undertaken by the following organizations: Association of Municipal Recycling Coordinators, the Municipal Waste Integration Network and the Recycling Council of Ontario. The overall project process was overseen by Earth Tech Canada. A list of 107 Ontario municipalities, thought to be responsible for provision of waste diversion programs, was divided up amongst each of the organizations. Assignments were made on the basis of membership (i.e., a municipality was a member of an organization), key personal contacts known, and/or previous working experience.

Each of the municipalities was sent a series of data collection sheets asking for their program costs, broken out into the following categories:

- Administration;
- Collection Costs Only;
- Processing Costs Only;
- Collection and Processing Costs (e.g., as under a combined contract);
- Total Gross Costs;
- Total Revenues; and
- Total Net Costs.

These line items were requested for each of the following program types:

- Single-family dwelling recycling programs;
- Multi-family dwelling recycling programs;
- Organics collection programs; and
- Household Special Wastes programs.

Municipalities were asked to include all capital and operating costs in their numbers. In certain cases where program costs were not reported at all, or capital costs were not available, cost

information was developed from surrogate sources and was introduced into the summary of program costs under the heading of 'additional costs'.

Each of the data collection organizations forwarded the costs data they had received from their assigned municipalities to Earth Tech, who reviewed the information for completeness and accuracy (on a relative basis). Where reported costs did not appear to be "correct" (e.g., portrayed a very high or low cost for what should have otherwise been a 'normal' program), a follow-up telephone call was made to double-check the results.

The reported cost numbers were then totalled for each program type and adjusted for certain 'missing' programs and cost categories (i.e., additional costs) to yield 'revised' total cost estimates..

### **Overview of Results – General Comments**

In general, the response rate for the data call was good, and in the case of recycling programs, was felt to be extremely good. The majority of the municipalities went to extended efforts to provide numbers within relatively tight timelines. Only a few municipalities outrightly stated that they would not provide data. The primary reason cited for this was time constraints. Two municipalities indicated that because of their efforts in restructuring, they did not have the manpower available to participate. At no time did any of the data collection organizations refute figures being provided. Overall, it was evident that the municipalities understood the importance of providing accurate figures.

The data that was submitted was subjected to due diligence review. Representatives from the data collection organizations and Earth Tech examined the information from the standpoint of their empirical knowledge and in consideration of the data that had recently been assembled under the CAO's Working Group on Solid Waste Management. As a result, it was concluded that there was a high level of confidence in the data that was provided, (i.e., the numbers being reported were representative of true costs of each of the programs being examined).

Table 1, below, presents a summary of the information that was received pursuant to the data call.

The reader's attention is drawn to the fact that Earth Tech is of the opinion that the program cost totals presented in this report are at least 10-15% understated, as they do not 'capture' all of the costs 'drivers' in all of the municipalities. For example, while discussions with program operators indicated that the majority of them were incorporating capital costs in the 'program cost' figures they were providing, some operators were not. In many of the later cases, the operators could not source such information.

***Additional costs will have to be added to reflect the costs for those programs that did not provide data and for those programs that were not included in the data call.***

**Table 1: Summary of Program Costs**

	Program				
	Recycling - SFD	Recycling - MFD	Recycling Total	Organics	Household Special Wastes
<b>Reported Costs</b>					
Gross Costs	\$ 94,547,000	\$ 5,335,000	\$ 99,882,000	\$ 19,834,000	\$ 7,081,000
Revenues	\$ 39,521,000	\$ 3,153,000	\$ 42,674,000	\$ 139,000	\$ 39,000
<b>Net Costs</b>	<b>\$ 55,027,000</b>	<b>\$ 2,182,000</b>	<b>\$ 57,209,000</b>	<b>\$ 19,695,000</b>	<b>\$ 7,041,000</b>
<b>Additional Capital Costs Based on Surrogate Data</b>					
Capital (1)	\$ 857,000	\$ -	\$ 857,000	\$ -	\$ -
<b>Revised Total A</b>	<b>\$ 55,884,000</b>	<b>\$ 2,182,000</b>	<b>\$ 58,066,000</b>	<b>\$ 19,695,000</b>	<b>\$ 7,041,000</b>
<b>Additional Costs From Outstanding Programs</b>					
Major Program Costs Missing (2)	\$ -	\$ -	\$ -	\$ 5,300,000	\$ 1,000,000
<b>Revised Total B</b>	<b>\$ 55,884,000</b>	<b>\$ 2,182,000</b>	<b>\$ 58,066,000</b>	<b>\$ 24,995,000</b>	<b>\$ 8,041,000</b>

Notes:

(1) Additional capital costs that have been added reflect collection vehicles. No surrogate MRF data were available to help supplement the data.

No information was available to estimate additional capital costs under the organics and HSW programs.

(2) This estimates the costs for those municipalities that could not provide information for their organics and HSW programs.

## Overview of Results – Recycling Programs

Almost all of the municipalities canvassed provided data for their 1999 recycling programs. One municipality's 1998 data was accepted, as data for 1999 was not available and there had been no change in that program's operations from 1998 to 1999.

The total cost for the recycling programs, expressed in terms of cost categories, is shown in Table 2, below. Overall, the gross cost of recycling programs in Ontario, for those municipalities that submitted data, was \$99.9 million. Revenues totalled \$42.7 million. The net cost of recycling in 1999 was \$57.2 million – as reported.

As noted above, not all of the municipalities included their capital costs. As a means of determining true total program costs, each municipality was 'pushed' for their capital costs. Where it was not possible to obtain these costs, an additional cost was calculated from surrogate information to account for program collection fleets. The number of collection vehicles the municipalities were using was requested. Using the assumption that each recycling truck had a capital cost of \$150,000 and was straight line depreciated over seven years, from the information provided by municipalities, it was estimated that an additional \$857,000 in recycling program costs were being incurred.

No surrogate information on MRF capital costs was available from municipalities and, therefore, estimates of unreported processing capital costs could not be specifically calculated.

**Table 2: Single Family and Multi-Family Recycling Program Costs**

	Cost Category						Net Cost
	Administration	Collection	Processing	C&P Combined	Gross Cost	Revenues	
<b>Recycling - Single Family Dwellings</b>							
Totals	\$ 6,626,000	\$ 53,110,000	\$ 22,863,000	\$ 11,948,000	\$ 94,547,000	\$ 39,521,000	\$ 55,027,000
<b>Recycling - Multifamily Dwellings</b>							
Totals	\$ 253,000	\$ 2,950,000	\$ 1,233,000	\$ 899,000	\$ 5,335,000	\$ 3,153,000	\$ 2,182,000
<b>Recycling - All Combined</b>							
TOTAL	\$ 6,879,000	\$ 56,060,000	\$ 24,096,000	\$ 12,847,000	\$ 99,882,000	\$ 42,674,000	\$ 57,209,000
Additional Estimated Capital Costs							\$ 857,000
Additional Estimated Major Unreported Costs							\$ -
<b>REVISED TOTAL</b>							<b>\$ 58,066,000</b>

**Table 3: Organics Program Costs**

	Cost Category						Net Cost
	Administration	Collection	Processing	C&P Combined	Gross Cost	Revenues	
<b>Organics Programs</b>							
Totals	\$ 1,785,000	\$ 10,564,000	\$ 5,409,000	\$ 2,076,000	\$ 19,834,000	\$ 139,000	\$ 19,695,000
Additional Estimated Capital Costs							\$ -
Additional Estimated Major Unreported Costs							\$ 5,300,000
<b>REVISED TOTAL</b>							<b>\$ 24,995,000</b>

**Table 4: Household Special Wastes Program Costs**

	Cost Category						Net Cost
	Administration	Collection	Processing	C&P Combined	Gross Cost	Revenues	
<b>Household Special Wastes Program</b>							
Totals	\$ 976,000	\$ 2,236,000	\$ 3,480,000	\$ 389,000	\$ 7,081,000	\$ 39,000	\$ 7,041,000
Additional Estimated Capital Costs							\$ -
Additional Estimated Major Unreported Costs							\$ 1,000,000
<b>REVISED TOTAL</b>							<b>\$ 8,041,000</b>

## **Overview of Results – Organics Programs**

While almost all of the municipalities canvassed provided some data for their organics' programs, there was an apparent need be cautious with the use of the information. For the most part, the costs provided represented only the cost of leaf and yard waste programs in Ontario. Only two municipalities reported costs for food waste programs, yet a number of other major municipalities were known to have food waste programs ongoing. 32 municipalities indicated that they did not offer an organics collection program.

The total cost for the recycling programs, expressed in terms of cost categories, is shown in Table 3, above. Overall, the gross cost of organics programs in Ontario, for those municipalities that submitted data, was \$19.8 million. Revenues totalled \$0.14 million. The net cost of the organics programs in 1999 was \$19.7 million – as reported.

Respecting whether or not capital costs were included in the program costs, only two municipalities specifically indicated that they did not report capital costs. Unfortunately no surrogate information was available from which to estimate the capital component of those two program costs. An estimate of \$5.3 million was made for the costs associated with those municipalities' programs which were known to be in operation but for which data was not reported.

## **Overview of Results – Household Special Wastes Programs**

Fifty of the 107 municipalities in the data call provided HSW program costs. 23 municipalities indicated that they did not offer an HSW program.

The total costs reported for the HSW programs are shown in Table 4, above. Overall, the gross cost of HSW programs in Ontario, for those municipalities that submitted data, was \$7.1 million. Revenues totalled \$0.04 million. The net cost of the HSW programs in 1999 was \$7.0 million – as reported.

Six of the municipalities indicated that they did not include any capital costs in their reported costs. Unfortunately no surrogate information was available from which to estimate the capital component of those six program costs. Of the municipalities that incorporated a capital cost, the cost was restricted to the capital value of the depots housing the HSW programs. No municipality indicated that they still actively use a collection fleet (e.g., toxic taxi or equivalent).

As indicated above, a significant number of municipalities, including certain major municipalities did not provide HSW program data. An estimate of \$1.0 million was made for the costs associated with those municipalities' programs which were known to be in operation but for which data was not reported.

## **Summary Recommendations**

### **Within a data call project schedule, adequate time must be provided in which can be conduct clarification discussions and due diligence reviews**

The information that was eventually assembled on the costs of recycling programs was felt to be quite accurate. This was achieved because, in many cases, data originally submitted was 'tested' and refined through subsequent dialogue with the data sources. It is evident from the experience of this data call that potential sources for information require a clear understanding of why data is being sought, the scope of the cost drivers that are to be included/excluded, what specific units of measure the data is to be expressed in, etc.. Achieving this understanding can be time consuming.

### **'Third party' involvement is required to secure trust**

Related to the recommendation, above, operators and municipalities continue to view certain information as proprietary and its release as being to their potential competitive disadvantage. The engagement of organizations such as AMRC and MWIN, through whom data can be filtered and rendered anonymous, is understandably necessary, particularly as the details of the funding mechanisms of the WDO initiative have not yet been structured. It is hoped that in the future familiarity with the funding program will engender an open flow of information.

### **A method for full cost accounting incorporating capital costs is required**

It appears in general that a number of municipalities still do not (or can not) prescribe to full cost accounting and, as such, do not fully understand the cost to deliver their programs.. Any one of the following reasons was cited for not tracking capital costs:

- it is a different department that tracks capital costs;
- not considered part of the programs costs;
- there are no capital costs because the assets were purchased outright at the start of the program;
- there are no capital costs because grants were used to purchase the assets.

This is an important issue that requires support come from the administration of any future data call project. Many program operators are now realizing that their equipment is reaching the point where it requires replacement and the cost of some of the equipment (especially collection vehicles) has increased dramatically since it was first purchased. It may be appropriate to integrate the finance department of the municipalities being canvassed into the early stage of a data call, particularly to assist program operators in addressing the issue of capital charges.