



Environment Accounts and Statistics Division

# Survey of Environmental Protection Expenditures, 2002

Confidential when completed

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

Si vous préférez ce questionnaire en français, veuillez cocher

### Correct as required

Company name

Establishment name

C / O

Address

City

Province/Territory

Postal code



## Please read before completing

### PURPOSE OF THE SURVEY

This survey provides a measure of the expenditures made by industry for environmental protection in Canada in response to Canadian and international environmental regulations, conventions and voluntary agreements. The survey also aims at identifying environmental management practices and technologies used in Canadian industry for the purpose of preventing or abating pollution. These data will be aggregated with information from other sources to produce official estimates of environmental protection expenditures.

The results of this survey will be published in the Statistics Canada publication *Environmental Protection Expenditures in the Business Sector, 2002*, Catalogue No. 16F0006XIE.

### 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 the previous written consent of that respondent. 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.

### AUTHORITY

This survey is conducted under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S19.

**COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THE STATISTICS ACT.**

### INQUIRIES

If you require assistance in completing this questionnaire or if you have any questions or comments regarding this survey, please refer to the *Guide to Definitions and Classification Details* or contact:

**Operations and Integration Division  
Statistics Canada  
Ottawa, ON, Canada, K1A 0T6**

Telephone (toll-free): **1-800-255-7726**

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

Email: **enviro.oid.exp@statcan.ca**

The questionnaire is available in an electronic spreadsheet format. Please contact the Operations and Integration Division if you prefer to use this reporting option.

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

**Important :** Please read the *Guide to Definitions and Classification Details* included with this form before answering. If your response for an item is zero, please write "0" in the corresponding box rather than leaving the cell blank.

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

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

For Statistics Canada use only

Rec.			
D	M	Y	

Ed.			
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D	M	Y	

Bat.			

Coll.	

FSC	

4-2300-2.1: 2002-11-15 STC / NAD - 475-04244

**Please report in thousands of Canadian dollars**

**1. Reporting year**

Report must cover your most recent fiscal year that ended at any time between **April 1, 2002 and March 31, 2003.**

Day	Month	Year	Day	Month	Year
010	020	030	040	050	060

From \_\_\_\_\_ to \_\_\_\_\_

**2. Environmental monitoring**

*If the expenditure is zero, please write "0" in corresponding box.*

**Include**

- ◆ Expenditures related to equipment, supplies, labour and purchased services required for monitoring pollutants emitted by this establishment. Expenditures associated with participation in the National Pollutant Release Inventory (NPRI) and other similar programs are to be included

<b>Operating expenses</b>		<b>Capital expenditures</b>		<b>Total</b>
\$ 000		\$ 000		\$ 000
100	+	110	=	120

**3. Environmental assessment and audits**

*If the expenditure is zero, please write "0" in corresponding box.*

**Include**

- ◆ Expenditures for reviews of current operations for compliance with regulations (audits)
- ◆ Expenditures to evaluate the environmental impact of proposed programs or projects (assessments)
- ◆ Expenditures for associated legal and consulting costs

<b>Operating expenses</b>		<b>Capital expenditures</b>		<b>Total</b>
\$ 000		\$ 000		\$ 000
130	+	140	=	150

**4. Site reclamation and decommissioning**

*If the expenditure is zero, please write "0" in corresponding box.*

**a) Expenditures on site reclamation made during the fiscal year 2002 for any active site belonging to your establishment**

<b>Operating expenses</b>		<b>Capital expenditures</b>		<b>Total</b>
\$ 000		\$ 000		\$ 000
161	+	171	=	181

**b) Expenditures on site decommissioning made during the fiscal year 2002 following the closing down of a site (even if closing occurred before 2002)**

<b>Operating expenses</b>		<b>Capital expenditures</b>		<b>Total</b>
\$ 000		\$ 000		\$ 000
162	+	172	=	182

**Exclude**

- ◆ Fines or compensation for environmental damage (this is to be reported in Question 8)
- ◆ Provisions for future environmental liability

**Please report in thousands of Canadian dollars**

**5. Protection and restoration of wildlife and habitat**

If the expenditure is zero, please write "0" in corresponding box.

**Include**

- ◆ Expenditures made to protect or restore wildlife and habitat that could be or have been adversely affected by this establishment's operations

**Exclude**

- ◆ Expenditures for site reclamation and decommissioning which are already reported in Question 4
- ◆ Expenditures for aesthetic purposes

Operating expenses \$ 000	Capital expenditures \$ 000	Total \$ 000
190	200	210

**6. Pollution abatement and control (end-of-pipe processes) and waste management**

Abatement and control of pollution are performed using end-of-pipe equipment or installations. **These end-of-pipe processes are not an integral part of production;** their sole purpose is to abate or to control undesirable substances resulting from normal production. **Refer to page 3 of the Guide.**

**a) Pollution abatement and control and waste management expenditures**

If the expenditure is zero, please write "0" in corresponding box.

**Include**

- ◆ Expenditures for equipment or facilities that are separately identifiable and that have been installed exclusively to reduce or eliminate pollutants resulting from production
- ◆ Expenditures related to waste collection, removal and treatment done by your establishment's or company's employees not already reported in Question 4 or 5
- ◆ Purchases of waste services not already reported in Question 4 or 5. Any sewerage management services or any other purchase of services reported in Question 11

**Exclude**

- ◆ Expenditures specific to workers' health and safety
- ◆ Expenditures on waste management or services reported in Question 4 or 5
- ◆ Expenditures for on-site recycling (Question 7)

Operating expenses \$ 000	Capital expenditures \$ 000	Total \$ 000
250	260	270

**b) Did you report capital expenditures in Question 6a (cell 260)?**

Yes  No <sup>275</sup> ► Go to Question 7

**1. What proportion of capital expenditures reported in cell 260 was spent on reducing or abating each of the following? Refer to page 3 of the Guide.**

Substances released to air %	Substances released to surface waters %	On-site releases to land/ underground injection %	Noise, vibration or radiation %
280	290	300	310

**= 100%**

**Please report in thousands of Canadian dollars**

**7. Pollution prevention**

"Pollution prevention is the use of processes, practices, materials, products or energy that avoid or minimize the creation of pollutants and waste, and reduce overall risk to human health or the environment."

*Pollution Prevention - A Federal Strategy for Action, Government of Canada (1995)*

This question identifies expenditures and methods used for the purpose of preventing or minimizing pollution and waste, or promoting resource conservation. **Refer to page 3 of the Guide.**

**a) Expenditures on pollution prevention**

*If the expenditure is zero, please write "0" in corresponding box.*

**Include**

- ◆ Expenditures for equipment or facilities integrated to a production process that avoid or minimize the production of pollutants and waste
- ◆ Expenditures for equipment or facilities related to leak and spill prevention. They may include expenditures on the following: spill containments; dyke extensions; and accessories (valves, pumps)
- ◆ Expenditures for equipment or facilities used for conserving energy or water
- ◆ Expenditures for equipment or facilities associated with recirculation, recovery, reuse and **on-site** recycling of materials or substances

**Exclude**

- ◆ Expenditures specific to worker's health and safety
- ◆ Expenditures already included in Questions 2 to 6

<b>Operating expenses</b>	<b>Capital expenditures</b>	<b>Total</b>	
\$ 000	\$ 000	\$ 000	
500	510	520	+ =

**b) Did you report capital expenditures in Question 7a (cell 510)?**

Yes   
  No <sup>525</sup>   
 ▶ Go to Question 7c

**1. What proportion of capital expenditures reported in cell 510 was spent on preventing or minimizing each of the following? Refer to Question 6b, page 3 of the Guide.**

Substances released to air	Substances released to surface waters	On-site releases to land/underground injection	Noise, vibration or radiation	Other	
%	%	%	%	%	
530	540	550	560	570	+ = 100 %

**Please report in thousands of Canadian dollars**

**7. Pollution prevention (Concluded)**

**c) Pollution prevention methods**

If you have prevented or reduced waste, pollutants or conserved resources in fiscal year 2002, please indicate how it was achieved by checking the appropriate box(es). Please include all projects regardless of whether they are required by regulation, convention or voluntary agreement. Refer to pages 3 and 4 of the **Guide** for a description of each method.

	<b>Yes</b>	<b>No</b>
Product design or reformulation .....	810 <input type="checkbox"/>	<input type="checkbox"/>
Equipment or process modifications (integrated process) .....	830 <input type="checkbox"/>	<input type="checkbox"/>
Recirculation, on-site recycling or reuse or recovery of materials or substances .....	850 <input checked="" type="checkbox"/>	<input type="checkbox"/>
Materials or feedstock substitution, solvent reduction, elimination or substitution .....	870 <input checked="" type="checkbox"/>	<input type="checkbox"/>
Improved inventory management or purchasing techniques .....	875 <input type="checkbox"/>	<input type="checkbox"/>
Prevention of leaks and spills .....	880 <input type="checkbox"/>	<input type="checkbox"/>
Good operating practices or pollution prevention training .....	885 <input type="checkbox"/>	<input type="checkbox"/>
<b>Other (Please specify)</b> .....	890 <input type="checkbox"/>	<input type="checkbox"/>
_____		
_____		
_____		

**8. Environmental charges**

If the expenditure is zero, please write "0" in corresponding box.

\$ 000

760
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**Include**

- ◆ Permits, fees, levies, special assessment and related fees
- ◆ Any fines, penalties, or damage awards paid to government agencies or to individuals
- ◆ Other charges paid to regulating bodies in order to allow operations to take place at this establishment

**9. Other environmental protection expenditures**

If the expenditure is zero, please write "0" in corresponding box.

\$ 000

770
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**Include**

- ◆ The operating costs of administrating your environmental program
- ◆ Environmental training and information programs
- ◆ Any other additional expenditures that are required to comply with environmental regulations, conventions or voluntary agreements

**Exclude**

- ◆ Research and development expenditures

**Please report in thousands of Canadian dollars**

**10. Total expenditures on environmental protection**

If the expenditure is zero, please write "0" in corresponding box.

Cell 801: includes total from operating expenses reported in questions 2 to 9.  
 Cell 802: includes total from capital expenditures reported in questions 2 to 7.  
 They should also include all data for which breakdowns were not available.

Operating expenses \$ 000	Capital expenditures \$ 000	Total \$ 000
801	802	803

**11. Purchase of environmental services**

**Of the total operating expenses and capital expenditures on environmental protection reported in Question 10, what proportions were purchased from a private contractor or government? Your best estimate is acceptable.** If the proportion is zero, please write "0" in corresponding box.

**Include**

- ◆ All expenditures associated with the use of waste collection and treatment service or a sewerage service provided by a private contractor or a federal, provincial/territorial or local government
- ◆ Any other purchase of environmental services provided by a private contractor or a federal, provincial/territorial or local government (examples include the purchase of environmental monitoring services; environmental assessment and audit services; construction and engineering services associated with the installation, repair or maintenance of pollution prevention, abatement and control infrastructure or equipment)

**Exclude**

- ◆ Any expenditures for environmental services provided by your establishment's or company's employees (own-account work)
- ◆ Expenditures for on-site recycling

**% of total  
operating expenses**

301	%
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**% of total capital  
expenditures**

502	%
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**12. Environmental Processes and Technologies**

**a) Did this establishment extract, refine, transport or distribute fossil fuels (coal, bitumen, crude oil or natural gas) in fiscal year 2002?**

Yes  Go to Question 12b      No  2000 Go to Question 12c

**b) Did this establishment use systems or equipment to reduce fugitive or vented greenhouse gas emissions in fiscal year 2002?** Refer to page 4 of the **Guide** for definition of fugitive greenhouse gas emissions and related technologies.

Yes       No  2001

**Did this establishment use systems or equipment to reduce greenhouse gas emissions other than fugitive or vented emissions (e.g. from the combustion of fossil fuels)?**

Yes       No  2002

**c) Did this establishment use systems or equipment to reduce greenhouse gas emissions from the generation of electricity in fiscal year 2002?** Refer to pages 4 and 5 of the **Guide** for examples and the definition of fugitive greenhouse gas emissions and related technologies.

Yes       No  2003

**Please report in thousands of Canadian dollars**

**12. Environmental Processes and Technologies (Continued)**

d) Did you use one or more of the following systems or equipment in fiscal year 2002? Please check the appropriate boxes.

Refer to pages 5 and 6 of the **Guide** for a description of each technology or process.

- |   | <b>Yes</b>                    | <b>No</b>                |
|---|-------------------------------|--------------------------|
| 1. Cogeneration. ....                                 | 1282 <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Small, mini and micro-hydroelectric facility. .... | 2004 <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Solar energy systems or equipment. ....            | 1288 <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Wind energy systems or equipment. ....             | 1289 <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Waste-to-energy systems or equipment. ....         | 1285 <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Other renewable energy systems or equipment. ....  | 2005 <input type="checkbox"/> | <input type="checkbox"/> |
- Please specify most important
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

- |  |                               |                          |
|--|-------------------------------|--------------------------|
| 7. Alternative fuel systems or equipment. ....   | 2006 <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Fuel substitution. ....   | 1284 <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Other systems, equipment or employee training that improved energy efficiency. .... | 1292 <input type="checkbox"/> | <input type="checkbox"/> |
- Please specify most important
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

e) Did you answer "Yes" to any part of Questions, 12b, 12c or 12d?

Yes  Go to Question 12f      No  2007 Go to Question 12h

f) What were your operating expenses and capital expenditures in fiscal year 2002 on the systems or equipment reported in Question 12b, 12c or 12d? (Please report in thousands of Canadian dollars. If the expenditure is zero, please write "0" in the corresponding box). Your best estimate is acceptable. Please exclude fuel costs.

Operating expenses \$ 000	Capital expenditures \$ 000	Total \$ 000
2008 <input style="width: 150px; height: 25px;" type="text"/>	+ 2009 <input style="width: 150px; height: 25px;" type="text"/>	= 2010 <input style="width: 150px; height: 25px;" type="text"/>

g) What proportion of your capital expenditures in fiscal year 2002 on machinery and equipment that reduced your greenhouse gas emissions was manufactured in Canada? (If the proportion is zero, please write "0" in the corresponding box) Your best estimate is acceptable.

2011 %

**12. Environmental Processes and Technologies (Continued)**

**h) During the last three years, 2000 to 2002, did this establishment put into operation new or significantly improved systems or equipment that reduced greenhouse gas emissions?**  
 Refer to page 6 of the **Guide** for a description of "new or significantly improved".

Yes  No  2012 Go to Question 12i

**Rank the overall impact of these new or significantly improved systems or equipment to reduce greenhouse gas emissions. (Please check the appropriate box)**

- 2013  Small
- 2014  Medium
- 2015  Large

**i) Obstacles and drivers**

**During the last three years, 2000 to 2002, which of the following factors were obstacles or drivers to the adoption of new or significantly improved systems or equipment to reduce greenhouse gas emissions?** Refer to page 6 of the **Guide**.

*Please check all that apply*

**Possible obstacles**

- 1. Lack of information or knowledge related to new or significantly improved systems or equipment . . . . . 2016
- 2. Lack of available new or significantly improved systems or equipment. . . . . 2017
- 3. Lack of skilled personnel to put new or significantly improved systems or equipment into operation . . . . . 2018
- 4. High cost of equipment . . . . . 2019
- 5. Lack of financing (internal, private or government) . . . . . 2020
- 6. Regulatory/policy barriers . . . . . 2021
- 7. Other (Please specify) \_\_\_\_\_ 2022
- 8. None . . . . . 2023

**Possible drivers**

- 1. Sufficient return of investment . . . . . 2024
- 2. Regulations . . . . . 2025
- 3. Voluntary agreement . . . . . 2026
- 4. Public relations . . . . . 2027
- 5. Corporate policy/culture/awareness . . . . . 2028
- 6. Other (Please specify) \_\_\_\_\_ 2029
- 7. None . . . . . 2030



**12. Environmental Processes and Technologies (Concluded)**

**j) Environmental biological treatment**

**Did you use biotechnology to abate, prevent or manage pollution or waste resulting from normal production in fiscal year 2002?** Refer to pages 6 and 7 of the **Guide**.

Yes  No  1400 Go to Question 13

*If yes, please indicate which biotechnology was used by checking the appropriate box(es).*

- Microbiologically enhanced recovery of material(s) ..... 1401
- Phytoremediation ..... 1402
- Bioremediation ..... 1403
- Biofiltration ..... 1404
- Natural or constructed wetland ..... 1405
- Bioleaching ..... 1406
- Bio-pulping ..... 1407
- Bio-bleaching ..... 1408
- Biodesulphurization ..... 1409
  
- Other (Please specify) \_\_\_\_\_ 1410

**13. Environmental Management Practices**

**Please indicate the environmental management practices adopted or utilized by this establishment in fiscal year 2002 to avoid or minimize pollution or to conserve resources.** Refer to pages 7 and 8 of the **Guide** for a description of each practice.

- |  | <b>Yes</b>                   | <b>No</b>                |
|--|------------------------------|--------------------------|
| a) Did this establishment use an environmental management system? .....  | 951 <input type="checkbox"/> | <input type="checkbox"/> |
| b) Did this establishment use Life Cycle Management, Life Cycle Assessment or Design for Environment for decision making? .....                | 965 <input type="checkbox"/> | <input type="checkbox"/> |
| c) Was this establishment ISO 14000 certified? .....   | 953 <input type="checkbox"/> | <input type="checkbox"/> |
| d) Did this establishment implement any environmental voluntary agreement, or did it participate in any voluntary environmental program? ..... | 955 <input type="checkbox"/> | <input type="checkbox"/> |
- Examples include Accelerated Reduction/Elimination of Toxics (ARET) or Voluntary Challenge and Registry (VCR).  
If yes, please list programs, accords or agreements.

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13. Environmental Management Practices (Concluded)		Yes	No
e) Did this establishment have a "green" procurement policy? .....	957	<input type="checkbox"/>	<input type="checkbox"/>
f) Were any of the goods produced by this establishment certified by an environmental program, such as the "Enviro Choice Program" operated by Terrachoice Inc.? .....	959	<input type="checkbox"/>	<input type="checkbox"/>
g) Did this establishment publish or contribute to annual or other reports on its environmental performance or sustainable development? .....	963	<input type="checkbox"/>	<input type="checkbox"/>
h) Did this establishment experience any cost savings as a result of implementing any of the environmental management practices outlined in this question or environmental technologies outlined in Question 12 or pollution prevention methods outlined in Question 7? .....	969	<input type="checkbox"/>	<input type="checkbox"/>
i) <b>Other</b> (Please specify) .....	967	<input type="checkbox"/>	<input type="checkbox"/>
<hr/> <hr/> <hr/> <hr/>			

**Certification**

*I certify that, to the best of my knowledge, the information provided in this questionnaire is correct and complete.*

900	Signature X	Date (D / M / Y)	940	Title
905	Name of person completing this questionnaire (type or print)	915	Telephone No.	920 Fax No.
925	Email address	930	Web site address	

Approximately how long did it take to collect the data and to complete this survey?  hours

**Comments**

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

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**If you have any questions, please contact us.**  
**Telephone (toll free) 1-800-255-7726**  
**Fax: 1-800-755-5514**  
**Email: enviro.oid.exp@statcan.ca**

**PLEASE RETURN THIS QUESTIONNAIRE IN THE ENVELOPE PROVIDED**

**Thank you for your cooperation**