



***Discussion Paper***

***E-Waste Stewardship  
Program***

***October 19, 2005***

***Energy, Science and Technology  
Green Manitoba Eco Solutions***

This document has been prepared by Green Manitoba *Eco Solutions* to provide background information to industry stakeholders on an enhanced and expanded program of product stewardship to be implemented in Manitoba. You may provide your comments on this process through any of the following options:

- Through participation in a consultation meeting to be held on October 25, 2005 at the Winnipeg Convention Centre.
- Through participation in a web cast to be held in conjunction with this meeting at [www.greenmanitoba.ca](http://www.greenmanitoba.ca)
- By providing your comments in writing

All affected stakeholders are encouraged to make their views known to Green Manitoba *Eco Solutions* through participation in the October 25 consultation or by submitting your comments in writing no later than November 8, 2005 to:

Doug Smith  
Director,  
Strategies, Relationships and Innovation  
Email: [DougSmith@gov.mb.ca](mailto:DougSmith@gov.mb.ca)

## 1. Introduction

This discussion paper sets out background information and issues under consideration by the Province of Manitoba for the management of waste electrical and electrical equipment in Manitoba. The document was prepared to assist discussions at the Industry Stewardship Workshop to be held in Winnipeg on October 25, 2005, under the auspices of Green Manitoba *Eco Solutions*.

## 2. Green Manitoba Eco-Solutions Overview

Green Manitoba has been established by the Province of Manitoba as an Agency to lead and coordinate an enhanced and expanded system for product stewardship, energy and water conservation and demand-side management, and sustainable transportation. The primary goals of Green Manitoba are to:

1. maximize outcomes in energy and water demand-side management (DSM), product stewardship and waste reduction, and sustainable transportation;
2. develop coordinated programming that involves communities and municipalities; and
3. be a key source of policy advice to government on these issues.

In regard to product stewardship, Green Manitoba will promote the development of effective and efficient management programs for designated waste streams which will:

1. protect Manitoba's environment;
2. fairly allocate the costs for management of these materials;
3. ensure that these programs are economically and environmentally sustainable; and
4. foster innovation and economic growth.

Three waste streams have been designated as priorities for immediate attention by Green Manitoba:

- printed papers and packaging;
- household hazardous wastes (HHW); and
- waste electrical and electronic equipment (e-waste).

The focus of Green Manitoba is on all the above products regardless of where used or managed as waste.

## 3. The Evolution of Product Stewardship in Manitoba

In Canada, there are over 50 Extended Producer Responsibility (EPR), or product stewardship programs operating at provincial, regional and national levels. These programs address more than a dozen separate products and materials. Manitoba has been actively working with stakeholders to implement product stewardship programs since 1990 in an effort to reduce the amount of waste going to landfill and conserve resources.

Manitoba's first product stewardship programs – the Manitoba Tire Stewardship Board (TSB) and the Manitoba Product Stewardship Corporation (MPSC) – were established in 1995. Since

that time, it has become generally accepted that increased industry responsibility in the design and operation of stewardship programs provides for greater flexibility to match revenue generation mechanisms with program expenditure requirements. Regional consistency in the operation of these programs is also desirable. Manitoba's Oil Stewardship Program managed by the Manitoba Association of Resource Recovery Corp. (MARRC) was built on these principles in 1997 and forms the model for Manitoba's enhanced product stewardship initiative being launched by Green Manitoba in 2005.

In developing new stewardship programs for Manitoba, it is recognized that the revised program focus should be consistent with current national and international approaches whereby the costs of managing designated waste materials are transferred from the municipal tax base to the producers and users of these products. Producer responsibility programs and corresponding Industry Funding Organizations (IFO's) launched in Ontario (Stewardship Ontario), Québec (Éco Enterprise Quebec) and British Columbia (Product Care) offer examples of broader producer responsibility models under consideration.

Manitoba's Waste Reduction and Prevention (WRAP) Act provides the legislative framework for introducing expanded producer responsibilities. The following table highlights the history and current status of regulations established under the WRAP Act since 1992 and the operational characteristics of Manitoba's product stewardship programs.

<p><b>Waste Reduction and Prevention (WRAP) Act (1990/94)</b></p> <ul style="list-style-type: none"> <li>▪ Enabling legislation; designate products or materials with potential to become waste for stewardship responsibilities <a href="http://web2.gov.mb.ca/laws/statutes/ccsm/w040e.php">http://web2.gov.mb.ca/laws/statutes/ccsm/w040e.php</a></li> </ul> <p><b>Product Stewardship Regulations</b></p> <ul style="list-style-type: none"> <li>▪ Beverage Container and Packaging Regulation (1992 – repealed 1995) <ul style="list-style-type: none"> <li>- <i>Industry operated organization, target based regulation with financial penalty for non-compliance of material recovery targets. This regulation was replaced by the Multi-material Stewardship Regulation.</i></li> </ul> </li> <li>▪ Multi-Material Stewardship (Interim Measures) Regulation (1995) <ul style="list-style-type: none"> <li>- <i>Statutory corporation (MPSC), regulated board and product levies, 3 year business plan approved by Minister</i></li> </ul> </li> <li>▪ Tire Stewardship Regulation (1995) <ul style="list-style-type: none"> <li>- <i>Statutory corporation (TSB), regulated board and product levies, 3 year business plan approved by Minister</i></li> </ul> </li> <li>▪ Used Oil, Filters and Containers Stewardship Regulation (1997) <ul style="list-style-type: none"> <li>- <i>Regulated stewardship responsibilities (MARRC), industry operated board, industry establishes revenue mechanism, 5 year Business Plan approved by Minister</i></li> </ul> </li> <li>▪ Household Hazardous Waste Regulation — DRAFT (2001) <ul style="list-style-type: none"> <li>- <i>Regulated stewardship responsibilities, 11 product HHW categories and electronics. Withdrawn by Cabinet pending an overall review of Manitoba's EPR policies and program directions.</i></li> </ul> </li> </ul>
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#### 4. Regulatory Changes

As the designated coordinating body, Green Manitoba, working in cooperation with Manitoba Conservation, product stewards, municipalities, ENGOs and consumer groups, is proposing to shift Manitoba's product stewardship approach to a regulated steward responsibility model in which the companies that produce or distribute these products (stewards) in Manitoba are responsible for developing a program or programs to manage designated wastes.

These changes will:

- build on the success of current programs to establish broad-based stewardship programs that are economically and environmentally sustainable;
- provide more flexibility for stewards to set program fees as may be required to implement the program;
- reduce government's direct involvement in program design and management; and
- reinforce the linkage between product design and the environment.

Where deemed necessary by Manitoba, Manitoba will modify existing regulations or introduce new regulations required to implement approved program plans and to address residual and non-recyclable components of the waste stream.

## **5. Guiding Principles for the Development of Product Stewardship Programs**

The following principles have been established by Green Manitoba to guide the development of product stewardship plans. Program-specific criteria will also be developed in consultation with program partners and other stakeholders.

### **5.1 General Principles**

1. The cost of managing designated waste materials should be borne by the producers and users of the product or packaging rather than by the taxpayer.
2. Programs to manage these materials must be economically and environmentally sustainable.
3. Product stewards are responsible for determining the method by which these materials are managed and how these costs are borne by the affected industry and potential program partners, subject to approval of government.
4. Fees required to support implementation of an approved program plan will be set and collected by approved not-for-profit Industry Funding Organizations (IFO) established for that purpose.
5. Programs will incorporate a public awareness and public education component.
6. Programs will operate province-wide providing public access that is convenient and fundamentally consistent.
7. Where practical and feasible, product stewardship programs in Manitoba should be harmonized with those of other provinces.

### **5.2 Accountability**

8. Funds raised for the management of a designated material or product category will be directly related to the costs of managing that designated material or product category.
9. Transparency of program operations will be provided through the development of industry proposals, business plans and annual reports which will be available to all stakeholders.
10. Designated IFO's will undertake broad consultations on business plan proposals prior to submission of those proposals to Green Manitoba for review.

### **5.3 The Role of Government**

11. Government will enact and enforce regulations to ensure a level playing field among stewards responsible for a designated waste stream.
12. Government will establish targets as part of program-specific criteria to monitor program performance.
13. Government will approve IFO Business Plans upon the recommendation of Green Manitoba.

### **6. Time Table**

The Government of Manitoba seeks to implement stewardship programs as quickly as possible. Consultation on regulation(s) and the development and submission of stewardship plans will need to occur expeditiously.

### **7. Proposed Regulatory Framework**

The proposed regulatory framework under Manitoba's Waste Reduction and Prevention Act (WRAP) is modeled on the existing Manitoba regulation, MR 86/97, Used Oil, Oil Filters and Containers Stewardship Regulation governing the collection and disposal of used oil, containers and oil filters. The Manitoba Association of Resource Recovery Corporation (MARCC) is the industry funding organization established to manage the Used Oil Stewardship Program.

- MARRC's 2002, Approved Business Plan and 2004 Annual Report is available at: [http://www.usedoilrecycling.com/html/about\\_man.htm](http://www.usedoilrecycling.com/html/about_man.htm)
- Manitoba's Used Oil, Oil Filters and Containers Stewardship Regulation (MR 86/97) is available at: <http://web2.gov.mb.ca/laws/regs/pdf/w040-086.97.pdf>

## **“Model” Stewardship Program Regulation:**

The regulation is a regulation under The Waste Reduction and Prevention (WRAP) Act.

### **Definitions**

*"designated material" means any of the products, substances, material, devices or equipment that are designated as designated material in the regulation;*

*"designated waste" means*

- a) *designated material*
  - i. *that through use, storage, handling, defect, damage, expiry of shelf life or other similar circumstance can no longer be used for its original purpose, or*
  - ii. *that, for any other reason, the owner or person in possession of the material intends to dispose of it, and*
- b) *the packaging or container in which designated material was supplied;*

*"designated waste stewardship program" means a waste reduction and prevention program for designated waste;*

*"steward of designated material" means*

- a) *the first person who, in the course of business in Manitoba, supplies designated material to another person, or*
- b) *a person who, in the course of business in Manitoba, uses a designated material obtained in a supply transaction outside of Manitoba;*

*"supply" means to transfer a property interest by*

- a) *sale, whether conditional or otherwise,*
- b) *exchange,*
- c) *barter,*
- d) *lease or rental, whether with an option to purchase or otherwise, or*
- e) *gift.*

## **DESIGNATED WASTE STEWARDSHIP PROGRAM**

### **Designation of Material**

- *Products, substances, material, devices or equipment are designated as designated material for the purpose of the Act.*

### **Prohibitions**

- *No person shall supply a designated material for consumption unless*
  - a) *the steward of the designated material operates or subscribes to a designated waste stewardship program for the material; or*
  - b) *the person operates or subscribes to a designated waste stewardship program for the material.*
- *No person shall in the course of business use in Manitoba a designated material obtained in a supply transaction outside of Manitoba unless the person operates or subscribes to a designated waste stewardship program for the material.*

- *No person shall supply a designated material for consumption in a retail sale in Manitoba unless the person makes available to the consumer point of sale information under a designated waste stewardship program for the material.*
- *No steward of designated material shall supply the material for consumption unless the steward has given written notice of intention to supply the material and a description*
  - a) *of the material to be supplied; and*
  - b) *of how the steward intends to meet the obligations of the regulation.*

### **Requirements for a Designated Waste Stewardship Program**

- *A designated waste stewardship program*
  - a) *shall be consistent with the principles of Sustainable Development set out in the WRAP Act;*
  - b) *shall be consistent with any written guidelines established respecting such programs; and*
  - c) *shall be open to any steward who wishes to subscribe to the program in accordance with the plan for the program approved under the regulation.*
- *A plan for a designated waste stewardship program shall include provision for*
  - a) *the establishment and administration of a waste reduction and prevention program for one or more categories of designated material;*
  - b) *the appropriate management of the designated waste included in the program in accordance with any written guidelines established by the minister;*
  - c) *a province-wide, convenient collection system for the designated waste included in the program, without user fees for users of the system;*
  - d) *a system for the payment of expenditures incurred in the collection, transportation, storage, processing and disposal of the designated waste in connection with the waste reduction and prevention program;*
  - e) *the orderly collection of revenues from subscribers to the program in balance with expenditures for the program;*
  - f) *the establishment and administration of education programs for the purpose of the waste reduction and prevention program;*
  - g) *the establishment and administration of a point of sale information program for the purpose of the waste reduction and prevention program; and*
  - h) *the payment of salaries and other costs of government for the administration and enforcement of this regulation and of the Act as it relates to the designated material included in the program.*
- *A plan for a designated waste stewardship program may include*
  - a) *provision for the establishment and administration of research and development activities related to the management of designated waste;*
  - b) *provision for training and educational activities related to the management of designated waste;*
  - c) *provision for activities related to pollution prevention and waste reduction; and*
  - d) *any other activities that the minister may approve.*

### **Approval of a Stewardship Plan**

- *An IFO that intends to operate a designated waste stewardship program shall submit a plan for the stewardship program and apply for approval of the plan.*
- *An IFO shall conduct public consultations on the development of the plan.*
- *An application for approval of a plan for a designated waste stewardship program or renewal of an approval shall include a business plan for the implementation of the IFO's responsibilities under the Act and the regulation covering the period for which the approval is being sought.*
- *A plan for a designated waste stewardship program, or for the renewal of an approval, shall be filed in the Public Registry upon submission. Comments will be received on the plan for 28 days from the date it is filed in the registry and the comments will be considered before making a decision on whether or not to approve the plan.*

### **Approval of a Plan**

- *A letter of approval will be issued to the IFO operating a designated waste stewardship program plan or for a renewal of approval. The letter of approval shall set out any conditions of approval.*

### **Implementation of plan**

*An IFO shall ensure that a designated waste stewardship program plan is implemented substantially in accordance with its intent, subject to any conditions of approval.*

## 8. Background on E-Waste Diversion Programs

The following information has been assembled from various documents.....

### 8.1 Status

#### 8.1.1 What is E-Waste

The generation of used / waste electronic and electrical products has accelerated in recent years in response to rapid changes and advances in technology and rising consumer demand. Jurisdictions across Europe, Asia and North America have begun to address how best to manage this growing quantity of used equipment.

While waste electronics represent 2%-3% of the residential waste stream, some of these electronic products contain hazardous substances such as lead, mercury, cadmium and brominated flammable retardants that can create environmental and health risks if not managed properly. The products also represent recoverable resources such as ferrous and non-ferrous base and precious metals, plastics and glass that can be recycled into other products.

There are several definitions of electronic waste and this can lead to uncertainty. For example, electronic waste, sometimes called e-waste, is typically limited to televisions and computer equipment. This is the case in Alberta and in other draft provincial regulations. Terminology used in Europe and in the Ontario regulation refers to waste electronic and electrical equipment (WEEE) and typically includes a broader range of products such as appliances, telecommunication devices and other products that operate using a plug or battery.

#### 8.1.2 Activities in Manitoba

The quantity of e-waste in Manitoba has not been accurately measured or estimated. In the summer of 2005, Waste Diversion Ontario (WDO) conducted a study for Ontario and prepared generation estimates for information technology, audio-visual, telecommunication and household appliances. The estimates, when pro-rated for Manitoba's population represent reasonable preliminary estimates for the province.

#### Electronic and Electrical Equipment Discarded in Manitoba in 2004\*

	Units Discarded	Tonnes Discarded
White Goods	125,536	10,467
Portables Appliances and Floor Care Equipment	452,724	1,581
Information Technology Equipment	144,306	1,819
Telecommunications Equipment	238,717	101
Audio-Visual Equipment	414,431	4,744
<b>Total</b>	<b>1,375,714</b>	<b>18,712</b>

\* Estimates have been derived from *Waste Electronic and Electrical Equipment Study* prepared by Waste Diversion Ontario in July 2005 (Table 2). Figures pro-rated based on Manitoba

Efforts to address the recovery of e-waste in Manitoba have been fairly limited. In 2002, a public- private and not-for-profit partnership called Electronic Product Stewardship Organization of Manitoba (EPSOM) was given the mandate to implement a research and demonstration project on the collection, reuse and recycling of used consumer electronics.

The weekend drop-off pilot program in October 2002 had electronics collected at five collection sites located in Winnipeg and one rural town. The pilot program collected 93.5 tonnes of which 42% were televisions, 24% computers and peripherals, 20% consumer electronics and 14% computer monitors.

The collected products were disassembled as part of the research to determine costs and potential revenues associated with recovery. The pilot program results and learnings are found in the findings report <http://www.mb.reducingwaste.ca> .

The Computer for Schools program is a joint initiative of the Government of Canada, the Manitoba Department of Education & Training and the Telephone Pioneers of America. Its purpose is to recycle surplus computer equipment and software to benefit education. The program is directed by a Provincial Advisory Board. This advisory board establishes the criteria for eligibility on an annual basis, and generally oversees the program operations. Telephone Pioneers, students on work experience and other volunteers, test, clean and refurbish equipment before it is provided to schools and libraries. Since 1995, over 25,000 computers and printers have been provided to Manitoba schools and libraries by the program (<http://www.cfsl.mb.ca/Background.htm>).

### *8.1.2 National Industry Activities*

Electronics Product Stewardship Canada (EPS Canada) is a not-for-profit corporation established in 2003 by leading manufacturers and brand owners to address the emerging issue of end of life management of electronics products. EPS Canada was founded by the Information Technology Association of Canada and Electro-Federation Canada and currently includes eighteen member corporations. The corporation's mandate is to assist in the development of harmonized programs as governments across Canada consider end-of-life stewardship regulations for electronics.

EPS Canada's membership includes the following: Apple, Canon, Dell, Epson, Hitachi, Hewlett-Packard, IBM, Lenovo, LG Electronics, Lexmark, Microsoft, Northern Micro, Panasonic, Samsung, Sharp, Sony, Toshiba, and Thomson. The organization was created through the joint efforts of the Information Technology Association of Canada (ITAC) and Electro-Federation Canada (EFC). <http://www.epsc.ca>

EPS Canada has published a draft stewardship program approach as a discussion document here: [http://www.epsc.ca/pdfs/EPS\\_Canada\\_BusinessPlan.pdf](http://www.epsc.ca/pdfs/EPS_Canada_BusinessPlan.pdf)

Many of the product manufacturers have implemented product take-back programs that are available to customers. There is typically a separate fee associated with these programs. Companies that operate take-back options for customers in Canada include

Hewlett-Packard, Dell Canada, plus many of the cell phone providers across the country.

### 8.1.3 Other Provinces

Currently Alberta is the only operating provincial e-waste program in Canada. The program was launched in October of 2004. Since then, more than 100 collection sites and e-roundups have been established across the province to collect old, end-of-life televisions & computers, and related electronics (e-waste) that were previously going into Alberta's landfills. These collection sites are paid an incentive for the volume of electronic material that they collect under the Program. There is also a processing incentive for registered and approved processors.

The incentives are paid through an environmental fee on electronic products. The fee ranges from \$8 to \$10 for computer laptops, printers and CPUs, \$12 for CRT and LCD computer monitors and four sized categories for televisions at \$15 (<19"), \$25 (19" to 29"), \$35 (30" to 45") and \$45 (>45").

Designated electronics under the program include:

- Televisions
- Computer monitors (CRT and LCD)
- CPUs
- Computer accessories: mouse, keyboard, cables desktop computer speakers
- Laptop and notebook computers
- Desktop printers and printer combination, such as desktop printers with faxing and/or scanning capabilities.

In its first year of operation, the Electronics Recycling Alberta (ERA) program recovered and diverted more than 35,000 monitors, 31,000 computers, 20,000 printers and 15,000 televisions which represents close to 1,500 tonnes. A link to ERA is as follows:

[www.albertarecycling.ca/default.cfm](http://www.albertarecycling.ca/default.cfm)

A number of Ontario municipalities have been collecting waste electronics for the past two to three years. The programs are collected at municipal drop-off depot locations, household special waste depots or through special event collections. In 2004, 115 municipal programs representing over 4 million residents had access to waste electronic collection program. The total amount diverted was over 15,000 tonnes, 14,000 tonnes of which were white goods.

These programs were in place before the Minister of the Environment designated waste electronic and electrical equipment under the Waste Diversion Act. The draft regulation in Ontario includes a much wider definition than any other province and includes:

- information technology equipment,
- audio visual equipment,
- telecommunications products
- household appliances
- toys and leisure products
- electrical or electronic tools
- navigational, measuring, monitoring, medical or control instruments.

The provincial program development in Ontario has not proceeded at this time and all existing electronic diversion programs are being operated and funded by municipal authorities.

Saskatchewan has very recently passed a regulation for e-waste while B.C. and Nova Scotia are in the process of drafting their regulations.

#### *8.1.4 United States*

Programs for waste electrical equipment are also expanding rapidly across the U.S. over the past few years. Currently, state programs are based primarily around banning the disposal of CRT devices such as televisions and computer monitors because of the lead found in these products. Currently there are four states with CRT disposal bans in place or planned within the next 12 months. These include Massachusetts, California, Maine and Minnesota.

Minnesota has one of the most advanced programs in the United States for the collection and recycling of e-waste. The Minnesota Office of Environmental Assistance (OEA) has been very active in the development of national stewardship programs while at the same time implementing pilot testing and funding programs throughout the state. Most local authorities have active drop-off depot or event based programs and in 2003, over 4,000 tonnes of electronic waste were diverted by county programs. The state also has an extensive network of intermediate processing and electronic waste recyclers.

In 2003, the Minnesota Legislature passed a law to ban the disposal, as garbage, of electronics containing a CRT. The disposal ban is to go into effect July 1, 2006. The ban was delayed by one year in order to consider management strategies for waste electronics and address concerns from local government regarding the costs to establish comprehensive electronics recycling programs.

<http://www.moea.state.mn.us/stewardship/electronics.cfm>

Other links to state programs and other national information clearinghouse include:

California - <http://www.ciwmb.ca.gov/Electronics/Act2003/>

Maine – <http://www.maine.gov/dep/rwm/recycle/computerrecy.htm>

Massachusetts - <http://www.mass.gov/dep/recycle/crt/crthome.htm>

## **9. Municipal Recycling Programs**

In Manitoba, Waste disposal ground operators are required to separate bulky metallic objects and comply with the Ozone Depleting Substances Act.

## **Questions to be addressed in this Consultation**

Several key issues and questions have been identified in advance of the workshop to facilitate discussion. These are:

### **Questions Related to All Designated Wastes**

- 1) Is the regulatory framework as laid out in this document a workable model for all designated wastes?
- 2) Who should be the obligated stewards in Manitoba?
- 3) What type of IFO governance model do you support and why? Examples could include:
  - a. Steward and non-steward participation on the board
  - b. Steward only board
  - c. Steward only board with other stakeholder representation through advisory committees
- 4) What would be the roles and responsibilities of the IFO that would need to be funded under the program?
- 5) What would be the roles and responsibilities of Green Manitoba in development and implementation of the program that would be funded by the IFO?
- 6) What roles should the government and the IFO have with regards to enforcement?
- 7) Should program rules incorporate a threshold (“de minimus”) that exempts small players? If so, what should be the basis for setting an exemption threshold?
- 8) Which existing organizations might be well positioned to assume IFO roles in Manitoba?

Does the Manitoba approach provide sufficient flexibility to allow for greater regional / national harmonization among provincial programs?

### **Specific Questions Related to E-Waste**

- 1) Should the program focus a) only on those products managed within the municipal stream, or b) those products plus similar products in the ICI sectors, or c) all similar products regardless of where they are used or disposed in Manitoba?
- 2) Who should the “obligated” party be for e-waste in Manitoba? What should the designating language in the regulation include to ensure level playing field?
- 3) What should be the appropriate roles and responsibilities for the stakeholders with regards to program development, e-waste collection, intermediate processing, recycling, program enforcement. Please consider this question with regards to the following stakeholders:
  - a. manufacturers/producers of electronic products,
  - b. retailers,
  - c. consumers,
  - d. municipal authorities,
  - e. NGOs, and
  - f. GMES

- 4) Should the range of electronic products be specifically set within the regulation or should this be established within the context of the program plan to be developed by the IFO?
- 5) Should the IFO payments to municipalities or other collectors be structured to encourage increased material recovery and program cost effectiveness?
- 6) What is an appropriate target for the management of these materials in Manitoba and who should set those targets?
- 7) Should the program encourage existing and future industry take-back programs?
- 8) What should be the role of Green Manitoba or other provincial and federal agencies and departments with regard to transborder and internet sales?
- 9) Who should be responsible for ensuring environmental standards are applied to collection and recycling organizations?