



Product Care
Manitoba Household Hazardous Waste
Draft Stewardship Plan

for the period April 1, 2011 to March 31, 2016

For consultation with stakeholders on June 21, 2010

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Executive Summary

This draft stewardship plan has been prepared pursuant to the requirements of the *Manitoba Household Hazardous Material and Prescribed Material Stewardship Regulation*.

The program covers specific categories of household hazardous waste including household paint, fluorescent lamps, flammable liquids, pesticides and other products (the "Program Products").

The plan will be used in consulting with stakeholders, and is subject to revision before submission to Manitoba Conservation. Themes arising from the consultation will be summarized and included in the filed plan.

Product Care will develop, implement and manage the plan. Product Care is a non-profit corporation established by its industry members to develop and manage product stewardship programs. The members of Product Care who distribute the Program Products in Manitoba will fund the program by remitting "eco-fees" to the program based on quantities sold.

Following approval of the program plan by Manitoba Conservation, program plan implementation will begin, including:

- identification and qualification of collection sites, transporters and processors
- creation of the communication strategy
- registration of Stewards
- final cost analysis, budget development and fee setting

This plan covers the period of five years April 1, 2011 to March 31, 2016, at which time the plan will be reviewed.

1. Regulatory Basis for Plan and Consultation Process

The program plan has been developed by Product Care Association pursuant to the requirements of *Household Hazardous Material and Prescribed Material Stewardship Regulation* (the "Regulation") issued under *The Waste Reduction and Prevention Act* (C.C.S.M. c. W40) and the draft Guideline for stewardship programs issued by Manitoba Conservation.

This version of the program plan is a draft for consultation purposes. The plan is posted on the Product Care website. A consultation event will be held in Winnipeg on Monday June 21. Stakeholders are invited to submit comments by July 16, 2010, to allow time to modify the plan before the submission of the plan to Green Manitoba and Manitoba Conservation. See Appendix C. for more information regarding the consultation event.

2. Stewardship Organization and Program Membership

Product Care is a non-profit corporation established by its industry members to develop and manage product stewardship programs. Product Care currently manages programs for fluorescent lights, paint, flammable liquids, pesticides, and gasoline in other provinces. The board of directors of Product Care includes representation for each product sector managed.

Product Care works with key industry organizations in the development of product stewardship programs including:

- Canadian Paint and Coatings Association (CPCA)
- Canadian Consumer Specialty Products Association (CCSPA)
- Electrical Equipment Manufacturers Association of Canada (EEMAC), a council of the Electro-Federation
- Retail Council of Canada (RCC)
- Canadian Petroleum Products Institute (CPPI)

Product Care will submit the final plan, on behalf of its members who will be obligated under the Regulation as stewards in Manitoba.

The Regulation states that "steward of designated material" means

- (a) the first person who, in the course of business in Manitoba, supplies a 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.

Membership in Product Care's Manitoba HHMPM stewardship program will be open to all stewards of the products which are included in the Product Care program (see "Program Products" in section 3). The program members may be manufacturers, distributors and retailers depending upon who is obligated under the Regulation. The Program will also permit customers or suppliers of the obligated steward to join the

program and file the required reports and fee remittances (e.g. a large retailer may choose to join the program and report on all brands sold).

The Manitoba program will harmonize with existing programs where possible. Product Care manages all or part of stewardship programs in BC, Alberta, Saskatchewan, Nova Scotia and New Brunswick. Some of the Program Products are the subject of stewardship programs in other provinces which are not managed by Product Care.

3. Program Products - General

Regulatory References: The *Household Hazardous Material and Prescribed Material Stewardship Regulation* refers to “designated material” as meaning “material designated in section 2” of the Regulation:

Designation of material

2. Devices, equipment, material, products or substances that are in the following categories of household hazardous material or prescribed material, and their containers, are designated as designated material for the purpose of the Act:

- (a) waste household hazardous materials category;
- (b) pesticides category;
- (c) pharmaceutical products category;
- (d) natural health products category;
- (e) automotive antifreeze category;
- (f) paint products category;
- (g) fluorescent lighting tubes and compact fluorescent lights category;
- (h) lead-acid automotive batteries category;
- (i) rechargeable batteries category;
- (j) other batteries category.

For each of the categories (the “HHMPM Categories”) the schedule (the “HHMPM Schedule”) to the Regulation (set out in Appendix A to this plan), sets out a “description of Included Devices, Equipment, Material, Products or Substances”.

The definition section of the Regulation also contains the following definition of “waste material”,

"waste material" means

- (a) household hazardous material or prescribed 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; and
- (b) the container in which household hazardous material or prescribed material was supplied.

Program Products Covered by Plan: This plan covers specified HHMPM Categories, or parts of HHMPM Categories (the “Program Products”) as described in the following individual Program Products sections. The Program does not cover all the HHMPM Categories.

If a product falls within more than one HHMPM Category, it will generally be classified by the program in the HHMPM Category which reflects the product use or disposal method. For example, oil based paint may be flammable, but will be classified as paint. Antifouling paint contains a pesticide and will be processed as a pesticide.

Residential Use products: This Program Plan covers the Program Products described below which are supplied for household use or application.

Products not included. In general, the program will not accept:

- Products that are unlabelled or cannot be identified (unknowns)
- Products that are leaking or improperly sealed
- Commercial, industrial or agricultural products
- Cosmetics, health and beauty aids
- Insect repellents, disinfectants and pet products

Sales and Market: The Regulation applies to HHMPM products which are supplied for final use in Manitoba.

Actual Manitoba sales data for the Program Products is not readily available. See the Program Products sections below for estimates of quantities sold based on available sales data based from programs in other provinces, adjusted for population. Some product categories are not the subject of a current stewardship program and so no data is available. Actual program member sales will be reported to the program after the program begins.

Consumable products: Many of the Program Products are designed to be consumed (i.e. paint, aerosols, flammable liquids and solvents, corrosives, toxics and pesticides). Most consumable Program Products have a long shelf life, and leftover product may be stored by the consumer with the intention of later use.

The time span between the purchase of a product and the decision by a consumer that it is no longer needed varies considerably. For this reasons, it is difficult to determine with any precision the amount of a consumable product that is sold in Manitoba, but is not used by the consumer, and therefore “available for collection”. Data from other provincial product stewardship programs will be used, where available, to provide an indication.

Durable Products: Products such as Fluorescent Lights are not a consumable product and theoretically 100% of the quantity sold will be available for collection. However, the lifespan of a fluorescent bulb depends on a number of factors including bulb quality and technology, the usage location (e.g. lights used in recessed fixtures may have a shorter

lifespan) and hours of use. Accordingly the estimation of the number of lights available for collection in a given future year requires data on both the number and lifespan of lights sold in prior years.

Product Containers: the program will not include already empty containers unless (1) they are already managed through the MB printed paper and packaging program, or (2) there is a recycling option available. It may be necessary for the Program to interact with the MB printed paper and packaging program with regard to the cost and management of containers.

Market and product information: Most of the Program Products are produced for and distributed within the North American market. The majority of the supply is distributed by manufacturers to distributors and then to the residential market through retailers, or through businesses who apply or install the product in a residence, such as commercial painters and builders. Products may also be imported directly by distributors and some large retailers.

Historic sales of paint, flammables have shown a gradual increase. Pesticide sales may be subject to laws limiting "cosmetic use". In 2009 the sales of these Program Products decreased due to economic conditions. There has been significant growth in sales of compact fluorescent lights over the past 5 years, as this technology has been promoted for energy savings. However, it is difficult to forecast the rate of replacement of fluorescent lights because of the increasing lifespan of the CFLs.

Program Product Categories: The following sections of the Program plan discuss individual HHMPM Categories in the following order:

Section 4: Waste Household Hazardous Materials

- (a) flammable materials;
- (b) corrosive materials;
- (c) physically hazardous materials
- (d) toxic materials;
- (e) environmentally hazardous materials,

Section 5: Pesticides

Section 6: Paint Products

- (a) latex, oil and solvent based architectural coatings
- (b) aerosol

Section 7: Fluorescent Lighting

- (a) Tubes and
- (b) Compact Fluorescent Lights

Information provided for each category: Each section provides the following information for the specified Program Product:

- Product definition information
- Estimated quantity sold, available for collection, and capture or recovery rates

Capture Rate means the amount of material collected divided by the amount of material available for collection in the same year

Recovery Rate means comparing the collection volume to the sales volume for the same year.

4. Waste Household Hazardous Materials

Subcategories: This HHMPM Category designated by s. 2(a) of the Regulation consists of 5 subcategories of Waste Household Hazardous Materials (“WHHM”):

- Flammable materials
- Corrosive materials
- Physically hazardous materials
- Toxic materials
- Environmentally hazardous materials

Product definition information:

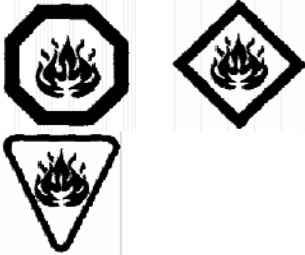

Table 1 : WHHM Category description in Regulation Schedule


Category Name	Description of Included Devices, Equipment, Material, Products or Substances
Waste Household Hazardous Materials	Devices, equipment, material, products and substances that meet the criteria for waste household hazardous materials set out in the CSA Standard Z752-03, Definition of Household Hazardous Waste, including, but not limited to, devices, equipment, material, products and substances that meet the criteria for <ol style="list-style-type: none"> flammable materials; corrosive materials; physically hazardous materials, including, but not limited to, <ol style="list-style-type: none"> explosives (but not including ammunition), and medical sharps carrying pathogens; toxic materials; or environmentally hazardous materials, including those materials that meet the criteria of being "toxic", and either "persistent" or "bio-accumulative" as those terms are described in Clauses 7.6.2.2. to 7.6.2.4. of that Standard.

Products included/excluded in Program for the WHHM Category:

With reference to the table above, the products included/excluded from the Program are as follows:

Table 2: WHHM Products Included and Excluded from Program

Subcategory	Included	Excluded
(a) flammable materials;	<p>Products displaying following symbols</p>  <p>flammable liquids as defined in CSA Standard Z752-03, including waste gasoline, in containers not exceeding 10 L capacity, except:</p> <ul style="list-style-type: none"> • (for aerosol flammables, not exceeding 660 g or 24 oz, • for gasoline: 25L 	<ul style="list-style-type: none"> • Non-liquid flammable materials • wine and distilled spirit beverages, • cosmetic and beauty products, • drugs, medicines and other health products, • gasoline not returned in an approved container
(b) corrosive materials;	<p>Products displaying following symbols</p>  <p>as defined in CSA Standard Z752-03,</p> <ul style="list-style-type: none"> • pH ≤ 1 or ≥ 13. For pH $> 1 \leq 3$ or $< 13 \geq 11$, may be included if meets acid reserve or alkali reserve test specified, • or if classified under TDGR as class 8 • maximum container size 4 L 	
(c) physically hazardous materials	compressed gas fuel cylinders such as welding	(i) explosives (including ammunition),

	fuel, camping cylinders, butane cylinders, less than 5 kg	(ii) medical sharps carrying pathogens; (iii) refillable propane cylinders (iv) aerosols containing materials which are not Program Products
(d) toxic materials;	<p>Products displaying the following poison symbols</p> <div style="text-align: center;">  </div> <p>as defined in CSA Standard Z752-03</p>	Excludes mercury switches, products already captured in pesticide category, products displaying a “caution” symbol.

For the following subcategory of WHHM, it has not been determined if there are any household products not already included in other HHMPM Categories.

(e) environmentally hazardous materials, including those materials that meet the criteria of being "toxic", and either "persistent" or "bio-accumulative" as those terms are described in Clauses 7.6.2.2. to 7.6.2.4. of that Standard.		
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Household/Domestic Use: According to CSA Standard Z752-03 (the “CSA HHMPM Standard”), referenced in the WHHM category description, the products are for “household” and “domestic” use only. Accordingly no Industrial, Commercial or Institutional use products of these categories will be included in the Program.

Table 3: Flammable Liquids: Estimated quantity sold and recovery rates

	Year 1 2011-12	Year 2 2012-13	Year 3 2013-14	Year 4 2014-15	Year 4 2015-16
Litres sold*	900,000	909,000	918,090	927,271	936,544
Rate of annual increase		1%	1%	1%	1%
Total Litres collected	16,200	18,180	20,198	22,255	24,350
% of quantity sold	1.8%	2.0%	2.2%	2.4%	2.6%

**Estimates are based on BC data for BC flammables category (definition in BC is more inclusive due to higher flashpoint in definition)*

Examples of flammables liquids include paint thinners, solvents, and camping fuels etc.

Table 4: Corrosives: Estimated quantity sold and recovery rates

	Year 1 2011-12	Year 2 2012-13	Year 3 2013-14	Year 4 2014-15	Year 4 2015-16
Litres sold*	1,520,000	1,535,200	1,550,552	1,566,058	1,581,718
Rate of annual increase		1%	1%	1%	1%
Total Litres collected	30,400	33,774	37,213	40,717	44,288
% of quantity sold	2.0%	2.2%	2.4%	2.6%	2.8%

**Estimates are based on Final Consolidated Stewardship Ontario MHSW Program Plan V. II – July 30, 2009*

Most corrosives are cleaners, bleaches or strippers.

Other WHHM materials: there is insufficient information available to estimate quantity sold, available for collection, and capture rates for physically hazardous materials, toxic materials and environmentally hazardous materials.

5. Pesticides

Table 5 : Pesticide Category description in Regulation Schedule

Category Name	Description of Included Devices, Equipment, Material, Products or Substances
Pesticides	Control products, as defined in the Pest Control Products Act (Canada), registered under that Act that (a) are required to be labelled with the product class designation "Domestic"; and (b) display on the label the symbol shown in Schedule III of the Pest Control Products Regulation (Canada) for the signal word "Poison"; but not including the following pest control products: (c) insect repellents; (d) sanitizers and disinfectants; (e) products for use on pets; (f) unpackaged products or products not ordinarily sold to, used or purchased by a consumer without repackaging.

Products included/excluded in Program for Pesticide Category: With reference to the table above, the products included/excluded from the Program are as follows:


Category	Included	Excluded
Pesticides	<p>Consumer pesticides that have both the poisonous (skull & cross bones) symbol and Pest Control Product (PCP) number. Maximum container size: Pesticides 10 Litres</p> 	<ul style="list-style-type: none"> • Pesticides which do not have both the poisonous symbol and the PCP number • insect repellents; • sanitizers and disinfectants; • pesticides for industrial, commercial or agricultural use

Table 6: Pesticides: Estimated quantity sold and recovery rates

	Year 1 2011-12	Year 2 2012-13	Year 3 2013-14	Year 4 2014-15	Year 4 2015-16
Litres sold*	43,200	43,200	43,200	43,200	43,200
Rate of annual increase		0%	0%	0%	0%
Total Litres collected	2,592	3,024	3,456	3,888	4,320
% of quantity sold	6%	7%	8%	9%	10%

*: Pesticide sales based on 2009 BC program sales data adjusted for population, assuming no increase of sales in Year 1 compared to 2009.

6. Paint Products

Product definition information:

Table 7: Paint Category description in Regulation

Category Name	Description of Included Devices, Equipment, Material, Products or Substances
Paint Products	<p>1. Latex, oil-and solvent-based architectural coatings, whether tinted or untinted, including paints and stains for commercial and homeowner use, but not including unpressurized coatings supplied in containers with a capacity of more than 30 L.</p> <p>2. Paints and stains sold in pressurized aerosol containers.</p>

The Program will include all types of paint aerosols. Maximum paint aerosol container size of 600 g.

Table 8: Paint: Estimated quantity sold, available for collection, and capture rates

	Year 1 2011-12	Year 2 2012-13	Year 3 2013-14	Year 4 2014-15	Year 4 2015-16
Litres sold*	8,800,000	8,888,000	8,976,880	9,066,649	9,157,315
Rate of annual increase		1%	1%	1%	1%
% available for collection**	10%	10%	10%	10%	10%
Litres available for collection	880,000	888,800	897,688	906,665	915,732
Total Litres collected	264,000	311,080	359,075	407,999	457,866
vol. recovered as % of quantity sold	3%	3.5%	4%	4.5%	5%
vol. recovered as % of qty available for collection	30%	35%	40%	45%	50%

* Values based on 2009 BC program sales data adjusted for population.

** "Available for Collection" means the maximum quantity of the Program Product that is theoretically available for collection by the program. Available for collection based on BC program experience and studies conducted for the Paint Product Stewardship Initiative of Product Stewardship Institute.

7. Fluorescent Lighting Tubes and Compact Fluorescent Lights

Product definition information:

Table 9: Fluorescent Light Category description in Regulation Schedule

Category Name	Description of Included Devices, Equipment, Material, Products or Substances
Fluorescent Lighting Tubes and Compact Fluorescent Lights	

The Program covers fluorescent lights marketed to residential users that are designed to be removed by the user. The two categories of fluorescent lights generally used for residential lighting are compact fluorescent lights and fluorescent tubes.

Estimated quantity sold, available for collection, and capture rates: Fluorescent lights are not a consumable product and theoretically 100% of the quantity sold should be available for collection at the end of the product’s lifespan.

For fluorescent lights, because of their durable nature, each product unit sold should eventually be available for collection. The determination of the number of units available for collection in a given year is subject to the availability of historic sales data, consumer use patterns and generally increasing product longevity. The estimation of the number of lights available for collection in a given future year requires data on both the number and lifespan of lights sold in prior years. Therefore the quantity of Program products available for collection will vary from year to year until the market and lifespans stabilize.

The lifespan of a fluorescent bulb depends on a number of factors including bulb quality and technology, the usage location (e.g. lights used in recessed fixtures may have a shorter lifespan) and hours of use.

The fluorescent light lifespan projections for this Program Plan are the same as those used in the BC Fluorescent Light Stewardship program, which in turn were based on the Stewardship Ontario lifespan model which used lifespan estimates that increased from 4.3 yrs for lights sold in 2003 to 10.5 yrs for lights sold in 2008. The estimated number of lights available for collection in Manitoba is presented in Table 11. After the program begins, improved sales data will be available, and further research will be undertaken to improve the method of estimating the amounts available for collection.

Due to the long lifespan of the fluorescent lights, the *capture rate* (quantity collected compared to quantity believed to be available for collection in that year) will be measured as opposed to the *recovery rate* (quantity collected compared to quantity sold in a given year).

The data in Table 10 will be used initially in determining the amount available for collection, subject to refinement after the Program begins. Annual sales quantities will continue to be recorded and that data will be used to calculate the future capture rates.

Table 10: Estimated Manitoba Sales Data for Fluorescent Lights ¹

	2003	2004	2005	2006	2007	2008
CFL - household (units)	215,000	174,000	276,000	279,000	637,000	533,000
Fluorescent Tubes – household (units)	153,000	130,000	154,000	147,000	139,000	135,000

Available for Collection: “Available for Collection” means the maximum quantity of the Program Product that is theoretically available for collection by the program.

Table 11: Fluorescent Lights available for collection

	2010 est'd sales	Available for Collection					
		basis	Year 1	Year 2	Year 3	Year 4	Year 5
Fluorescent lights - CFL -household (units)	500,000	Based on lifespan of units sold in prior years	82,800	83,700	108,550	81,850	110,350
Fluorescent Tubes – household (units)	135,000	Based on lifespan of units sold in prior years	46,200	44,100	38,250	37,550	50,850

Table 12: Provisional capture rate targets for fluorescent lights

Year	Year 1	Year 2	Year 3	Year 4	Year 5
Target Capture %	10%	17%	25%	32%	40%

¹. Estimates for lights provided by EEMAC with Manitoba data estimated as 12% of EEMAC member Western Canada sales assuming residential sales to be 100% of CFL with ballasts and 50% of fluorescent tube consumer channel sales and 5% of the fluorescent tube commercial channel sales. Sales data for non-EEMAC producers is not known. .

8. Program Collection and Transportation System

Collection System: The current collection infrastructure in Manitoba for HHMPM consists of:

- one hazardous waste facility for the City of Winnipeg operated by Miller Environmental (open one to two days per month or by appointment)
- hazardous waste collection events that are held in other municipalities throughout the province on an annual basis (11 one day events scheduled for 2010).

The existing infrastructure is funded by the Manitoba government. See Appendix E for a report of HHMPM products collected by the government sponsored program in 2009.

In addition, some Manitoba retailers currently accept compact fluorescent lights.

The intent of the Program is to substantially improve the collection system to provide improved accessibility for Manitoba residents. However, the development of an improved collection system will be particularly challenging in Manitoba because of the absence of current infrastructure, such as municipal collection sites and beverage container return facilities which are present in some other provinces.

Product Care will assess the potential for establishing collection sites at facilities such as retailers, recycling organizations (both non-profit and for profit), local government recycling centres or transfer stations/landfills or at other associations or businesses. The Program will not directly own or manage collection depots, but intends to contract with interested organizations. Some collection sites may only accept specific products. There will be no charge to drop off program products.

Actual collection locations will be determined through the implementation process based on facilities available, ability to meet regulations including environmental and safety ones, proximity to population, ease of access and cost effectiveness.

The Program will assess the convenience and availability of the collection sites system on an ongoing basis and endeavour to establish collection sites in areas not served by the existing facilities. If a permanent site cannot be located, the Program will consider running Program-sponsored collection events, possibly in partnership with a retailer, or local governments or other stewardship agencies.

Collection site hours of operation will vary depending on the type of facility. Any retail sites will be open at least 5 days a week, including a weekend day, and 8 hours per day. Local government facilities may only be open during limited hours.

Collection Site Procedures: The Program will enter into contracts with each collection site which will cover respective roles and responsibilities. A collection site procedures manual will be distributed to and maintained by all collection sites and events. The

manual will be referenced in the collection site agreement. The manual will include information on the following:

- collection site standards
- Program Products information
- reporting requirements
- management requirements and operational procedures.

Collection site operators will receive training from the Program, including site visits, with respect to collection site procedures including customer service and environmental risk reduction.

The Program will coordinate logistics for the collection system, arranging the drop off of empty collection containers and pick up of full collection containers. Collections sites will be trained and collection containers will be in place prior to the site becoming operational. Each site will have appropriate signage.

The Program website will include a “find your nearest collection site” system that is both map based and list based. Each collection site listing will provide address, operating hours and any special instructions particular to that location.

Collection Container System: Each collection site will be equipped with one or more collection containers in which to receive and temporarily store Program Products. Collection sites will be required to keep collection containers in a secure location, not accessible outside of operating hours. For the purpose of operational efficiency, where appropriate, consideration will be given to using standard re-useable collection containers.

Paint Exchange: In order to increase the quantity of leftover architectural paint which is re-used, Program collection sites and other locations will be invited to offer “Paint Exchange” to their customers. In the Paint Exchange program, better quality containers of paint (excluding aerosols) are placed on display shelving and available at no cost to another consumer. Other Program Products are not considered suitable for a reuse program.

Large Volume Users: Certain sites that are better able to handle large volumes may be designated as “preferred sites” for certain consumers such as commercial painters. Advance notice of large volumes may be requested to ensure proper storage and handling at the collection site. The program will give consideration to special direct pickups for high volume users. Collection sites may voluntarily limit the amount of Program Products accepted from a customer at any one time.

Collection Site Inspections: The Program will conduct site visits of all collection sites on a routine basis (generally at least once per year) to ensure compliance by the site with Program requirements, as well with health, safety and environmental standards.

Transportation: It is the intention of the program to contract out the function of transportation of Program Products from collection points to consolidation or processing

locations. For many of the Program Products, the federal Transportation of Dangerous Goods Regulation and the Dangerous Goods Handling and Transportation Regulation will have application along with other regulations such as Generator Registration and Carrier Licensing Regulation.

9. Processing of Program Products

The Program intends to negotiate contracts for the processing of Program Products and will consider available service providers based on a number of factors including location, capacity, processing methods, downstream markets and conformity with Product Care requirements.

Processing and recycling options will vary by Program Product. For many Program Products, such as pesticides, toxics and corrosives, there are no known recycling options. For others, such as flammable liquids and alkyd paint, energy recovery may be an option. For products such as paint and fluorescent tubes, recycling options may be available. However the service provider infrastructure for these Program Products is limited or non-existent in Manitoba and the surrounding geographic area.

The Program will investigate the possibility of new processing options being established, or cost/benefit of the utilization of processing options located at a distance, which will take place during the initial operating period of the Program. Until these processing options are identified and developed, many products will be “downcycled” (ie. managed through a an available process that is lower on the recycling hierarchy).

10. Product Life Cycle and the Pollution Prevention Hierarchy

The application of the pollution prevention hierarchy will vary by Program Product.

Reduce: The program will encourage consumers to buy the right amount of a consumable product for their needs resulting in less waste and a reduction in the volume of product needlessly purchased.

Fluorescent lights are recognized as an energy efficient lighting technology, and significant advances have been made in increasing product lifespans and manufacturing the lights using fewer resources. This has reduced the environmental impact of the lights, as fewer are required to provide the same service. The main environmental concern with fluorescent lights is the mercury content. Mercury is a necessary part of fluorescent light technology, but manufacturers have been able to reduce the amount of mercury in the lights by over 80% since 1990. The average Canadian compact fluorescent light contains 3.7 mg of mercury (roughly the size of the ball in the tip of a ball point pen).²

² EEMAC reporting to CCME

Redesign/Eliminate: Progress has been seen in paint and other products in reducing the environmental impact of the materials used in product production. This is influenced by VOC (volatile organic compounds) regulations which are being introduced. In particular, the market share of latex paint compared to oil based paint is steadily increasing, now representing more than 80% of sales.

Presently, close to 100% of the materials in fluorescent tubes can be recycled so redesign for this reason is not warranted.³ The process for CFL recycling is similar to that of the tubes however the additional component of a plastic or ceramic base is more difficult to recycle.

Reuse: With the exception of paint, reuse is not appropriate for most program products as they either no longer function (i.e. end-of-life fluorescent lights) or pose an environmental risk and thus are safer to remove from the recycling loop (i.e. pesticides, particularly as older pesticides are often more hazardous than newer types. See "Paint Exchange" above.

Recycle/Recover: Data collected from Product Care's BC program shows that up to 68% of paint (usually latex) can be recycled as paint or as a component of other products such as cement or concrete, while 30% is used for energy recovery (oil-based paint). Flammable liquids and gasoline as used for energy recovery.

Fluorescent lights will be broken down into their component parts. The resulting glass, mercury and other components will be recovered and put back into the market. Almost 100% of the materials can be recycled in this system for fluorescent tubes but the plastic bases of the CFLs are consumed in the thermal metal recovery process where they contribute to the energy used to heat the system and ceramic bases end up as aggregate or waste. The program will strive to increase the percentage of material recycled over time for the appropriate products.

Disposal: For certain Program Products, there is no available management option except disposal. All pesticides will be disposed through high temperature incineration, under controlled conditions. For products such as corrosives, physical or chemical treatment is the only available management option.

³ Kelleher, M. (2007). *Fluorescent Lighting in Ontario –Lifespan Model and Research Report to Waste Diversion Ontario*. Accessed at <http://www.wdo.ca/files/domain4116/Final%20Review%20of%20Fluorescent%20Capacity%20Report%20Sept%2025%2007.pdf>

11. Risk Management

The Program will work with its contractors (collection sites, transporters and processors) to ensure compliance with environmental regulations and best environmental practices with respect to the collection, transportation and consolidation and processing of Program Products. The environmental risk management system will include:

- contractual mandates that all service providers comply with all applicable local, provincial and federal laws
- use of Collection Site Standards
- training, reporting and guidelines etc. for collection sites and transporters
- a system-wide tracking system: the Program will ensure tracking of and recordkeeping of the use, reuse, recycling and disposal of the Program Products. The program will track the Program Products from the point of collection to its ultimate disposition.
- compliance reviews of collection sites, transporters and recyclers (initial processors and downstream) conducted by third party or in-house personnel including on-site visits at least every two years, to ensure compliance and for tracking system verification.
- requirement of certificates of disposal and recycling
- environmental liability insurance for the Program, and from all service providers as specified by contract.

12. Consumer Awareness

The Program will develop a communication strategy to inform consumers of the product stewardship program, the location of collection facilities or events, how to manage products in a safe manner as well as the environmental benefits of participating in the program.

Communication Methods: The Program will use a number of methods of creating consumer awareness of the program including the location of the collection sites, and information regarding safe product handling. Communication methods will include:

- **Website** – The Program website will include information on what items can be returned and where, using a map based depot finder.
- **Program toll free number** – the program will have a toll free number service by which consumers can contact the program during business hours and obtain information about disposing of the program products.
- **Point of return** – all participating collection depots will be provided with program signage to display and counter cards or brochures to distribute to consumers.

- **Local government** – An information package will be sent to local governments to inform them of the new program, including a press release, web link, appropriate media and contact information.
- **Annual report** – the reports will be posted on the website.
- **Earned media and advertising** – the Program will also consider the use of earned media (press releases etc) and paid advertising.
- **Other** – other methods of communications may be identified through the market research.

Partnerships

Product Care will also investigate partnering with organizations that already communicate with consumers about product return or specific Program Products. Some possible avenues are:

- **Point of sale** –these could include shelf talkers, counter cards, consumer brochures or program posters. These will be offered routinely to retailers for display and distribution to consumers.
- **Local government**– the Program will seek partnership opportunities with local governments to inform householders of the availability of the program which may include:
 - participation in community recycling events and promotions
 - links from local government websites to Program website and inclusion of program information in recycling specific web pages.
 - inclusion of program information with local government householder communications.
- **Utilities** – Manitoba Hydro promotes the energy efficiency use of fluorescent lights. The Program will investigate opportunities to work with the utility to reach target consumers and to ensure consistent messaging.
- **Others** –Brand owners and other agencies with an interest in recycling may wish to have links to the proposed stewardship agency website.

The communication strategy will be modified over time based on the results of the methods employed and ongoing studies.

13. Administration

Fees and Budgeting: The program will be funded by members. The members will pay fees to the Program based on the number of units of Program Products sold in Manitoba after April 1, 2011. Quantities sold will be reported each reporting period. The fees will be set through the Program budgeting process as program revenue and cost estimates are developed and will be posted on the program website once set. Fees may be adjusted in the future to address surpluses or deficits but all fees are used for program purposes. The Program will provide for fees which are “visible” to the consumer. It will be at the option of the stewards, and then their distributors and retailers to recover the fees as a separate invoice item or charge.. The program will develop recommended language for stewards to use should they choose to show a visible fee. No fees will be charged at the point of collection.

Risk Management and Reserve Fund: As part of its risk management system, the Program intends to obtain environmental insurance and to build and maintain a reserve fund. The reserve fund will serve a number of purposes including the funding of any uninsured environmental claims and to allow for stability of program funding in case of unexpected collection volume increases, fluctuations in operating costs or reduced revenue due to economic or other factors. The reserve fund will be limited to an amount determined by the Board of Directors.

Steward Compliance: In order to maintain a ‘level playing field’ for the program members and to ensure compliance with the Regulation, The proposed stewardship agency will actively search for, identify and recruit stewards of program products.

Techniques to identify potential stewards will include internet searches, store visits, information obtained through steward compliance reviews conducted by the program, through audits of collected materials and by information received from existing members.

Once a potential steward is identified, the following is the compliance process protocol to be followed by the Program in recruiting stewards of such products:

- Notification by telephone and/or email advising of the regulatory obligation and inviting the steward to join the Program within a 30 day period.
- Two formal letters to the steward noting the prior contact, referring to the regulatory obligation and advising the steward of the Program’s intention to notify the government for enforcement purposes if compliance is not demonstrated within a second 30 day period
- The Program will issue a letter to Manitoba Conservation advising of the circumstances including the name of the brand owner, the product and location of place of sale, with the request to the Conservation Manitoba to investigate and if appropriate conduct enforcement proceedings.

Dispute Resolution Procedure

The proposed stewardship agency will contract with all suppliers and service providers to the Program by the use of commercial agreements. Any disputes arising from collection or processing contracts would be resolved using normal commercial legal procedures.

14. Strategies and Actions

In this section the strategies and actions for implementing the program and improving program performance are set out. As this is a new program with few precedents, strategies and actions have been listed for the first two years with the expectation that future actions will be determined by the experience and needs identified during the actual operation of the program. The potential strategies and actions for later years are listed for information purposes only. An action plan for actions in years 3-5 will be developed at the end of year 2 based on the program experience and results to that date.

Table 13: Collection Strategies

Vision	To continually increase collection of available products through a network of accessible, well-run collection sites
	<u>Actions</u>
year 1	<ul style="list-style-type: none"> Establish collection network, analyse coverage, determine need for collection events
year 2	<ul style="list-style-type: none"> Expand the number of permanent collection sites, conduct events as needed
Possible actions for later years	<ul style="list-style-type: none"> Continue to improve collection system coverage and accessibility Obtain feedback from local government and address issues Support the imposition of landfill bans where adequate collection facilities exist Analyse barriers and develop strategies to improve capture rate Participate in municipal waste audits to determine leakage from program

Table 14: Awareness

Vision	To have all consumers of the products aware of the program, where to find depot location information and how to safely handle the product
	<u>Actions</u>
year 1	<ul style="list-style-type: none"> Establish the program with launch-specific communication Implement the communications strategy
year 2	<ul style="list-style-type: none"> Conduct consumer awareness survey Modify communication strategy to address deficiencies found in awareness survey Work with potential partners

Possible actions for later years	<ul style="list-style-type: none"> • Conduct community based social marketing pilot projects • Conduct consumer awareness studies and focus groups • Use results to modify communication strategy • Roll out successful pilot programs to the broader community and continue testing new ones
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Table 15: Research & Development

Vision	To continually improve the program and conduct research and development to achieve this
	<u>Actions</u>
year 1	<ul style="list-style-type: none"> • Research and evaluate best practices for determining and measuring units available for collection and other methods to determine collection rate (such as surveys, waste audits, etc)
year 2	<ul style="list-style-type: none"> • Conduct research and demonstration projects for new or improved technologies and reusable transportation container systems
Possible actions for later years	<ul style="list-style-type: none"> • Research to identify program areas that need improvement and identify actions to address them • Identify and strengthen existing markets and develop new markets for recycled materials

15. Program Performance & Targets

General: Product Care will assess the performance of the program with the quantitative measures noted below, which will be presented in the program annual reports (see Appendix B) and available to the public on the program website. For certain performance measures it will be appropriate to develop targets.

It should be noted that unlike some other provinces, there is no existing network of collection sites in Manitoba for HHMPM (whether local government, non profit or recycling businesses). Achieving the same degree of performance of programs in other jurisdictions may take longer as the capacity is built within Manitoba.

Recovery and Capture Rates: Setting meaningful collection targets is a challenge due to the lack of Manitoba-specific sales data and lack of comparable programs for many Program Products (i.e. toxics, corrosives, fluorescent lights). See tables above under each product category for provisional targets. The program plans to collect Manitoba specific data from stewards and determine the most appropriate way to measure program performance with regards to collection. The experience and data gained during the first years of the Program will allow for more meaningful measures of performance to be determined and targets to be set.

Consumer Awareness: The plan for creating consumer awareness is discussed above. To measure the performance of the communication strategy the Program proposes to conduct a consumer awareness survey periodically to track consumer awareness of the program and product handling.

Other Performance Measures: The Program will develop performance measures including:

- Accessibility of collection system
- Progress of product management against the pollution prevention hierarchy

Other performance measures will be tracked (though they may not be suitable for targets) and new performance measures may be developed as the Program progresses. They will be included in the annual reports.

16. Stakeholder Consultation

Stakeholder consultation will be conducted in June and July, 2010 as a prerequisite to the filing of this plan with the Conservation Manitoba. The consultations will include:

- Emailed communication to stakeholders (who will be requested to forward it to their members where appropriate)
- Consultation meeting and webinar held in Winnipeg on June 21, 2010.
- Written submissions by stakeholders

The consultation process is intended to solicit feedback and ideas to strengthen the plan, explain why certain options were included in the plan, discuss alternatives, and generate interest in partnering where synergies exist between the plan and the work of other organizations. See Appendix C for the consultation invitation.

Appendix A. HHMPM Product Category Schedule to Manitoba Regulation

Category Name	Description of Included Devices, Equipment, Material, Products or Substances
Waste Household Hazardous Materials	<p>Devices, equipment, material, products and substances that meet the criteria for waste household hazardous materials set out in the CSA Standard Z752-03, Definition of Household Hazardous Waste, including, but not limited to, devices, equipment, material, products and substances that meet the criteria for</p> <ul style="list-style-type: none"> (a) flammable materials; (b) corrosive materials; (c) physically hazardous materials, including, but not limited to, <ul style="list-style-type: none"> (i) explosives (but not including ammunition), and (ii) medical sharps carrying pathogens; (d) toxic materials; or (e) environmentally hazardous materials, including those materials that meet the criteria of being "toxic", and either "persistent" or "bio-accumulative" as those terms are described in Clauses 7.6.2.2. to 7.6.2.4. of that Standard.
Pesticides	<p>Control products, as defined in the Pest Control Products Act (Canada), registered under that Act that (a) are required to be labelled with the product class designation "Domestic"; and (b) display on the label the symbol shown in Schedule III of the Pest Control Products Regulation (Canada) for the signal word "Poison"; but not including the following pest control products: (c) insect repellents; (d) sanitizers and disinfectants; (e) products for use on pets; (f) unpackaged products or products not ordinarily sold to, used or purchased by a consumer without repackaging.</p>
Pharmaceutical Products	<p>A substance or mixture of substances manufactured, sold or represented for use in</p> <ul style="list-style-type: none"> (a) the diagnosis, treatment, mitigation or prevention of a disease, disorder or abnormal physical state, or its symptoms; or (b) restoring, correcting or modifying organic functions; including, but not limited to, medications available with or without a prescription, but not including contact lens disinfectants, antidandruff products and shampoos, cosmetics, antiperspirants, antiseptic or medicated skin-care products, sunburn protectants, mouthwashes, fluoridated toothpastes, and veterinary medications and products. This category is limited to household quantities of pharmaceutical products.
Natural Health Products	<p>A natural health product as defined in The Natural Health Products Regulation under The Food and Drugs Act (Canada). This category is limited to household quantities of natural health products.</p>
Automotive Antifreeze	

Paint Products	<p>1. Latex, oil-and solvent-based architectural coatings, whether tinted or untinted, including paints and stains for commercial and homeowner use, but not including unpressurized coatings supplied in containers with a capacity of more than 30 L.</p> <p>2. Paints and stains sold in pressurized aerosol containers.</p>
Fluorescent Lighting Tub Compact Fluorescent Lights	
Lead-Acid Automotive Batteries	Devices that convert chemical energy to electrical energy for use in motor vehicles.
Rechargeable Batteries	Devices that convert chemical energy to electrical energy and that can be restored to full charge by the application of electrical energy.
Other Batteries	Devices that convert chemical energy to electrical energy including, but not limited to, zinc-air, zinc-carbon, lithium, silver-oxide or alkaline-type batteries, but not including batteries in the lead acid automotive batteries and rechargeable batteries categories.

Appendix B. Annual Report

Annual Report Requirements

Section H of the Manitoba Draft Guideline for Hazardous or Prescribed Household Material Stewardship provides the following information respecting Annual Reports:

Section 16(1) of the Hazardous or Prescribed Household Material Stewardship Regulation requires operators of approved program plans to submit an annual report within 90 days after the end of each fiscal year. In addition to Section 16 (2) of the regulation, which provides the minimum requirements for an annual report, operators shall:

1. post a copy of the report on the program website;
2. document the performance in adherence to the program plan; and
3. specify what the stewards will do to reduce or eliminate any gap between actual and projected performance.

An annual report should also include information on the following:

1. Educational Materials and Strategies

- a. Includes a description of educational materials and strategies.
- b. Meeting program plan performance measures likely will require a successful public education strategy.
- c. Some examples of educational tools include newspaper, radio and TV advertisements, web pages, flyers and posters.

2. Collection Facilities

- a. Include information about collection/processing facilities.

3. Reducing Environmental Impacts

- a. Include efforts taken to reduce environmental impacts through a reduction in the disposal of waste material. In reporting on these measures, program operators may consolidate and aggregate individual steward reporting requirements to protect proprietary information
- b. Identify efforts to reduce the environmental impacts of designated material throughout the product life-cycle, including increased reusability and recyclability.
- c. Demonstrate a commitment to continuous improvement.

4. Consistency with the principles of Pollution Prevention and the 4Rs Hierarchy

- a. Include a description of how the recovered product was managed in accordance with the principles of pollution prevention and the 4Rs hierarchy.
- b. The operator may report on what percentage of material is managed according to the principles of pollution prevention and at each level of the 4R hierarchy.

5. Recovery Rate

- a. Document product recovery rate information.
- b. Aggregated data of the total amount of product sold and collected, along with the recovery rate if applicable or an alternative performance measure if not, is a key performance measure, as long as it shows both what is recovered and what is not.
- c. The amount of product collected and processed in each regional district should be reported if possible.

6. Financial Statements

- a. Submit independently audited financial statements.
- b. Demonstrate commitment to financial transparency and accountability for how all funds collected from consumers are managed. Individual companies' proprietary information will not be disclosed in any documentation. The program operator/IPO is responsible for establishing secure data reporting and management systems.



Appendix C. Consultation Invitation



Save the date! June 21, 2010

Notice of Public Consultation:

Manitoba Household Hazardous Waste Stewardship Programs

And Commercial Pesticide Container Stewardship Program

Please forward this notice to your members or other stakeholders

Dear Sir or Madam,

You are invited to attend the public consultation event and simultaneous webinar for several proposed Manitoba Household Hazardous Waste (HHW) stewardship programs and for the CleanFARMS™ commercial pesticide container stewardship program. The event takes place on **June 21, 2010** at the 'Inn at the Forks' in Winnipeg. The schedule for the event is as follows:

Time	Program/Product	Contact Person	For more information
8:30 a.m.	Welcome/Green MB/MB Conservation	Jim Ferguson / Rod McCormick	
9 a.m.	Call2Recycle - Batteries	Carl Smith Phone: 678-419-9990 csmith@call2recycle.org	Tyrone Biljan 416-535-9210 tbiljan@call2recycle.ca
10 a.m.	Product Care: fluorescent lamps, paint, flammables, domestic pesticides, other household hazardous waste	Mark Kurschner Phone: 1 877 592 2972 x 201 mark@productcare.org	belinda@productcare.org 1-877 592 2972 x 200 www.productcare.org/MB-HHW-Consultations
11:30 a.m.	Commercial Pesticide Containers	Barry Friesen, CleanFARMS™ Inc. Phone: 416-622-4460 friesenb@cleanfarms.ca	www.cleanfarms.ca
12:30pm	Lunch break – on your own		
2 p.m.	Thermostats	Krista Friesen Phone: 1-416-922-2448 x246 kfriesen@summerhillgroup.ca	www.switchthestat.ca
3p.m.	Medications/natural health products	Ginette Vanasse Phone : 613-723-7282 Ginette.vanasse@medicationsreturn.ca	www.medicationsreturn.ca
4 p.m.	Automotive Antifreeze	Ron Benson Phone: (204) 632-5255	marrc@mts.net

Appendix D. Definitions & Abbreviations

BC	British Columbia
CCME	Canadian Council of Ministers of the Environment
CFL	Compact Fluorescent Lights
CSA	Canadian Standards Association
HHMPM	Household Hazardous Material and Prescribed Material
IFO	Industry Funding Organization
MB	Manitoba

Appendix E. HHMPM Collection Volumes 2009

Manitoba 2009 Household Hazardous Waste Collection Volumes

	Winnipeg Waste Winnipeg Only	Rural Waste Types Rural Only	Total
	Total lt/kg YTD	Total lt/kg YTD	Total lt/kg YTD
Acetylene Cylinder	449		449
Acid solutions	3,146	1,423	4,569
Adhesives	37,490	14,330	51,820
Aerosols/compressed gases	7,508	5,039	12,547
Alkaline solutions	11,200	5,367	16,567
Antifreeze	3,995	-	3,995
Antifreeze/fuels	-	3,125	3,125
Antifreeze/debris/containers	245	-	245
Asbestos	1,004	2	1,006
Camping/Welding Propanes	1,204	91	1,295
Carbon Dioxide Cylinder	9		9
Cyanide	209	2	211
Cylinders	-	74	74
Ewaste	0	-	-
Fire Extinguishers	487	76	563
Flammable Solids	0	19,480	19,480
Fluorescent Tubes	2,999	831	3,830
Freon Cylinders	727	80	807
Fuels	3,165	-	3,165
Gases	-	2	2
Grease	-	205	205
Halogenated Solvents	-	20	20
Latex Paint	200,000	89,660	289,660
Mercury/debris	227	79	306
Nicad/Alkaline batteries	3,909	1,978	5,887
Non PCB Ballasts	534	20	554
Oil based paints	115,000	94,490	209,490
Oily wastes	1,465	349	1,814
Oily water	0	-	-
Organic solids	-	59	59
Oxidizing Labpack	11,970	4,130	16,100
PCB ballasts	0	866	866
PCB Paint	218	-	218
Pesticide Halogenated Liquid	12,615	8,067	20,682
Pesticide Halogenated Solid	1,200	480	1,680
Pharmaceuticals	8,140	421	8,561
Reactive Waste	80	3	83
Sharps	0	-	-
Solvents	55,333	-	55,333
Tar	-	410	410
Tetrachloroethylene	0	-	-
Tetrachloroethylene	60	-	60
SubTotal	484,588	251,159	735,746
Batteries, Acid filled	11,469	2,167	13,636
Propane Bottles	481	235	716
Total quantity	496,537	253,561	750,098
Total Number of Vehicles	5,367	2,766	8,133