



Product Care Association

British Columbia Product Stewardship Plan

for:

- **Paint category**
- **Solvent and flammable liquids category**
- **Pesticide category**
- **Gasoline category**

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- Solvent and flammable liquids product category
- Pesticides product category
- Gasoline product category

1. Regulatory Basis for this plan

This stewardship plan is filed by Product Care Association with the BC Ministry of Environment, pursuant to the requirements of Recycling Regulation B.C. Reg. 449/2004 (the "Regulation") for the following categories of residuals listed in Schedule 2 of the regulation:

- Paint
- Solvent and Flammable Liquids
- Pesticide
- Gasoline

This plan describes the current program as well as planning priorities for the next 5 year period **2006-2011** in the context of the approval criteria set forth in the Regulation,

2. Overview of existing programs:

Product Care Association was formed in 2001 as the result of the merger of the BC Paint and Product Care Association and the Consumer Product Care Associations. Paint stewardship was originally introduced in British Columbia in 1994, and the regulation requiring stewardship for the other residuals in Product Care's programs, in 1997. Product Care is a federal not for profit corporation governed by a multi sector industry board of directors.

Product Care's members are the manufacturers, distributors and retailers of products which are the subject of the Product Care programs. Product Care's members remit eco-fees to Product Care based on product type and container size for the paint, flammable and pesticide categories. Product Care operates a collection depot network across BC of Paint Depots and Paint Plus Depots which collect paint, flammable liquids, pesticides and gasoline.

Post-consumer leftover residuals received at the Product Care depots are transported to Product Care's central processing facility in Surrey, BC. At the processing facility, the product containers are sorted and emptied into shipping containers. The bulked residuals are then transported to a variety of destinations for reuse, recycling or other product management options.

Product Care also conducts a communication and education program to ensure consumer awareness of the program, as well as proper handling of program products.

3. Collection system – access and dispute resolution [Section 5 (1) (c) (iii) and (vi)]

Product Care currently operates 103 permanent year-round collection depots in British Columbia: 61 Paint Depots which collect leftover paint, and 42 Paint Plus depots which also collect flammables, pesticides and gasoline. There is at least one Paint Plus depot in each Regional District of BC. There is no charge to drop off program products. A complete list of depots is available at the Product Care website: www.productcare.org.

Product Care does not directly own or manage any depots but contracts with existing collection sites. Typically Product Care depots are co-located at facilities such as local government recycling centres or transfer stations, at beverage container depots or at other associations or businesses.

Products are collected at depots using a modular reusable covered bin system supplied by Product Care to the depots. In the case of flammables, pesticides and gasoline, the bins are housed in a secondary containment system for added environmental protection and fire safety. This consists of a walk-in concrete room which includes safety systems such as fire detectors, door release mechanism and ventilation. The size and expense of this secondary containment system has been one of the limiting factors. Recently Product Care has developed a steel “over-bin” which meets safety requirements and is suitable for outside applications.

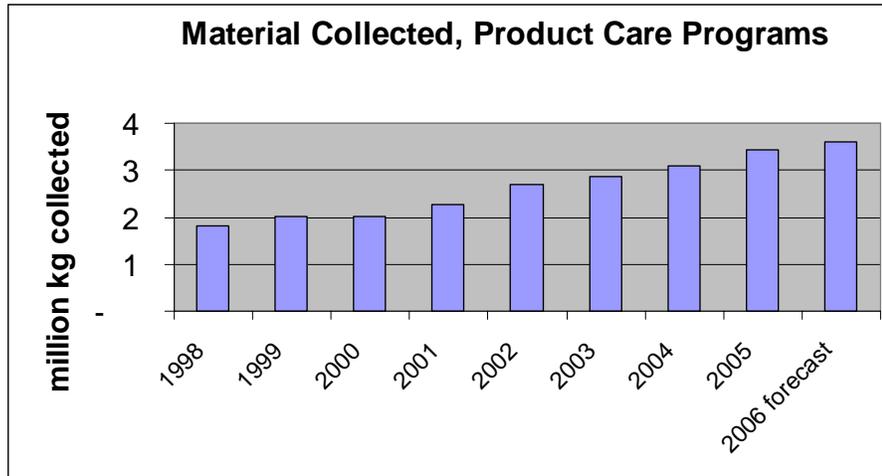
Product Care also supplements the depot collection system with a number of one-day events, often in participation with a municipality or regional district.

Dispute Resolution Process. Product Care contracts with all suppliers to its program using commercial agreements. All collection depots are contracted to the program using renewable agreements which provide for a cancellation by either party on 30 days notice. Any disputes arising from collection or processing contracts would be resolved using normal commercial legal procedures.

2006-2011: Product Care intends to increase the number of depots overall, and increase the number of Paint Plus Depots (which may be an expansion of service from an existing Paint Depot to a Paint Plus Depot), supplemented as necessary by collection events. This will be an ongoing process and will depend on local need for depot service and availability of suitable sites and partners. The program will focus on the specific locations raised during the consultation process.

4. Management of Collected Materials [Section 5 (1) (c) (viii)]

The following chart indicates quantity of residuals and containers recovered by the program over the past 9 years:



Consolidation and Bulking: Leftover products which have been received at depots are transported in reusable bins to consolidation points in different parts of the province. Full trailer loads are then shipped to the Product Care processing facility in Surrey, BC. At the processing facility, consumer containers are inspected, sorted, emptied and the contents are bulked in drums or other shipping containers.

This table provides a breakdown of liquid volume collected by product category in the year 2005:

| 2005 | Paint (non aerosol) | Paint Aerosol | Flammable Liquids/Gasoline. | Pesticides |
|--------------------------|---------------------|---------------|-----------------------------|------------|
| Recovery (litres) | 2,164,042 | 17,360 | 54,386 | 7,656 |

Product Management: Product Care endeavours to manage collected products in accordance with the “pollution prevention hierarchy”.

A. Paint

- **Reuse** – Product Care conducts a “paint exchange” program by which better quality, fuller cans of paint are made available to consumers at no charge. Aerosol paints are not reused to avoid misuse for graffiti. Other products managed by Product Care are not suitable for give away due to safety and liability reasons. Some of the groups which utilize the paint exchange program are amateur theatre companies, farmers, charities, and homeowners. In the Greater Vancouver area, Product Care operates a paint exchange store at its main processing facility which is open five days a week during business hours. Outside of the Greater Vancouver area, paint exchanges are operated at participating depots.

- **Recycling** – Product Care utilizes a number of options for paint recycling including:
 - Reprocessing leftover latex and alkyd paint into paint and coatings products. The amount being reprocessed continues to increase as options become available to the program.
 - Latex paint as raw material incorporated in the manufacture of recycled concrete, and in the manufacture of Portland cement.
 - Extraction of solvents from alkyd paints. The recovered solvent is then used in other processes such as asphalt production.
- **Energy Recovery** – due to the high solvent content of alkyd paints, alkyd paints are suitable for energy recovery.
- **Other Disposal** – no paint products are disposed of in the landfill or in any other way.

B. Flammables

Because the nature of flammable products, and the fact that many flammable products are intended as fuels to begin with, flammables are managed for energy recovery as alternative fuels in facilities which comply with all air quality regulations.

C. Pesticides

Due to the nature of pesticides, there is no reuse or recycling option available, and all pesticides are incinerated at high temperature government regulated incinerators.

D. Gasoline

Due to the nature of gasoline, which is intended to be used as a fuel, waste gasoline is managed as an alternative fuel.

E. Containers

See discussion of Container Management below.

2006-2011: Product Care will continue to look for and utilize options which move volume “up” the pollution prevention hierarchy. In particular Product Care will seek to expand the “paint exchange” program at existing depots and at other locations.

5. Collection of Containers [Section 5 (1) (c) (ii)]

In the Regulation, empty paint containers are specifically included in the paint residual product categories definitions in Schedule 2. Accordingly the Product Care Paint Program accepts containers which contain leftover paint, as well as empty paint containers. With regard to the flammables, pesticides, and gasoline categories, the program accepts containers which hold residual quantities of those products but not already empty containers.

In 2005, 729 tonnes of metal and 75 tonnes of plastic containers were recycled. The following table summarizes the current container recycling options utilized by the Product Care program.

| Product | Container type | Management method |
|----------------------|--|---|
| Paint | metal paint containers | emptied, baled, dried and recycled as scrap metal |
| | 5 gallon plastic pails (#2 HDPE plastic) | dried, handles removed, shredded, recycled into plastic |
| | black plastic (#5 polypropylene) | energy recovery |
| | aerosols | after paint and propellant are recovered, recycled as scrap metal |
| Flammable | metal | for many types of flammables such as solvents and thinners and fuels, the empty container is recycled as scrap metal. |
| | plastic (except #3 chlorinated plastics) | energy recovery |
| | other - #3 chlorinated plastics, tubes etc | items such as #3 chlorinated plastics and glue containers cannot be recycled and are disposed of as solid waste |
| Pesticide containers | all containers | triple rinsed as required and disposed as solid waste |
| Gasoline | metal or plastic | Once emptied, all plastic and metal gasoline containers are recycled. (see "Gasoline Containers" below) |

Note that empty container recycling options vary with market conditions, for example poor past prices for scrap steel resulted in landfilling of empty steel paint containers.

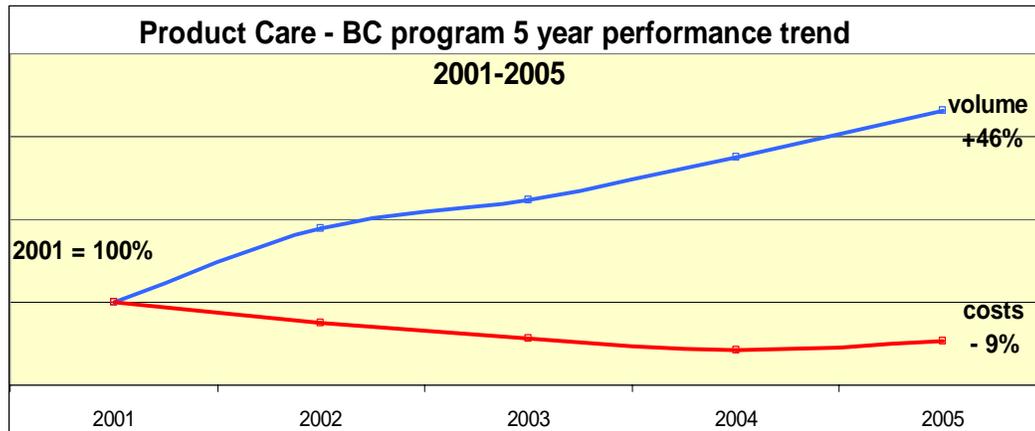
For many consumers, other local options exist for container recycling, for example dry empty metal paint containers can usually be recycled with other scrap metal. In other jurisdictions, consumers have the convenience of placing empty containers in the blue box system.

Gasoline containers: for safety reasons, the program requires waste gasoline to be left at the collection depot in approved ULC containers and the containers are not returned to the consumer. Consumers can obtain a \$6 reimbursement from Product Care to cover the cost of a new container, up to maximum of three claims per person per year.

2006-2011: Product Care will continue its efforts to identify local alternatives for container recycling which will reduce program cost and transportation requirements, as well as improved options for container recycling which are higher on the pollution prevention hierarchy.

6. Program Performance - Management of Program Costs and Environmental Impacts [Section 5 (1) (c) (i) and (v)]

The following chart shows the Product Care program trends for volume of material recovered, compared to total program costs.



During the five year period 2001 to 2005, the volume of material recovered by the program increased by 46% and the total cost of the program decreased by 9%. The decrease in program costs, despite the increase in volume can be attributed mainly to improved program administrative efficiencies and the identification of additional product management methods and vendors. Product Care conducts a regular analysis of costs by product sector to determine if eco fee adjustments are required.

Product Care pays all of the costs of collecting leftover products (including historic products i.e. products sold before the programs began for which no eco fee has been collected) and of managing the products collected. This cost is funded by eco fees paid to Product Care by its members. For many but not all products the eco fee is recovered at the time of retail sale as a separate charge. Eco fee rates are established by the allocation of the costs of managing different product types and container sizes. Eco fee rates are listed on the Product Care website www.productcare.org.

The eco fees charged on products in the Product Care program have never been increased, and have been decreased on several occasions. Product Care’s audited annual financial statements are available on its website www.productcare.org.

Risk Management / Reserve Fund: The primary basis for the inclusion of the residual products in the Regulation is to reduce environmental risk due to the hazardous nature of these products. Product Care reduces environmental risk arising from product management using a number of methods including commercially available environmental insurance and a reserve fund. Product Care has accrued a reserve fund which is limited to the amount which is two times annual program revenue. The reserve fund serves a number of purposes. The primary purpose is as a reserve in case of environmental claims. The fund also allows for

stability of program funding in case of volume increases, fluctuations in operational costs or reduced revenue.

2006-2011: Product Care will continue in its efforts to improve both environmental effectiveness and cost efficiency of the program. One tool is to identify potential synergies with other programs for collection, transportation and consumer awareness.

7. **Consumer Awareness** [Section 5 (1) (c) (iv)]

The Regulation requires that the plan makes adequate provision for “making consumers aware of (A) the producer’s product stewardship program, (B) the location of collection facilities, and (C) how to manage products in a safe manner.

Product Care uses a number of methods of creating consumer awareness of the program including the location of the collection sites, and information regarding product handling. These include:

- **Website** - www.productcare.org (also the websites paintrecycling.com and paintrecycling.ca redirect to the Product Care website)
- **Point of sale** – consumer brochures are distributed to over 4000 retailers in B.C., as well as program posters in different sizes, at no cost. The brochures are redesigned and distributed to all retailers at least every two years, and are distributed to retailers upon request at any time. Product Care is also testing a paint container sticker which the retailer places on the container at the time of sale. The sticker will inform the consumer how to access the program by referring to the program hotline and website.
- **Municipal partnerships** – Product Care offers brochures at no cost to municipalities for distribution with municipal mailings. Product Care participates in municipal calendars by advertising Product Care’s program information. Product Care has participated in a number of community recycling events and promotions.
- **Recycling Hotline** 1 800 667 4321 or 604 RECYCLE– Product Care is a long time participant in the RCBC recycling hotline service by which consumers can contact RCBC operators during business hours 6 days a week (Monday through Saturday, 9 am to 4 pm) and obtain information about disposing of Product Care program products as well as any other products.
- **Point of Return** – all participating Product Care depots display program signage and maintain a supply of consumer brochures
- **Trade Painters** – trade painters are significant consumers of paint and flammable (solvent and paint thinners) products. Dedicated mailings to trade painters and related associations (such as apartment owners) are conducted. In addition, a special trade painter direct drop off program has been promoted.

2006-2011: Product Care will substantially increase the communications element of its program, through existing channels as well as initiatives such as the following:

Market research study: Product Care will conduct a consumer market research survey to determine consumer awareness of the program and to gather other

information which may assist the program. The survey may include questions regarding:

- awareness of the program and methods utilized by consumer to obtain program information.
- awareness of and satisfaction with the collection system including desirable depot characteristics
- identification of target audiences, key messages and information channels for Product Care's communication program
- quantity of leftover residuals in respondent's household, and intentions regarding use or disposal.
- consumer perceptions regarding the level of eco fees in relation to the perceived environmental benefit.
- consumer's method of determining quantity of product required at time of purchase

Point of Sale: Product Care will focus on retailer awareness and participation. This will include the introduction of "recycle me" container stickers which are applied by the retailer to the container at the time of sale.

Municipal Partnerships: Product Care will continue to seek opportunities to partner with municipalities in informing householders of the availability of the program.

8. **Product Life Cycle Management** [Section 5 (1) (c) (vii)]

The Regulation refers to "...eliminating or reducing the environmental impacts of a product through the product's life cycle." Many of the products included in the Product Care programs have changed over time as a result of design for environment considerations. In particular:

- There has been a steady shift from oil based (alkyd) paints to water based latex paints with the result that currently in British Columbia approximately 70% of household paints sold are latex and the remaining 30% are oil based. It is expected that this trend will continue in the future with the market share of oil based paint continuing to drop as a consumer preference for latex paint increases and technical specifications improve. Federal regulations including regulations relating to the composition of surface coatings and for volatile organic compounds, is also hastening the process of reducing the environmental impact of paint products.
- There is a steady trend due to consumer preference, municipal bylaws restricting the use of pesticides, and federal regulatory requirements for producers to develop increasingly benign pest control products.

Tools used by Product Care Association which may have an impact on product life cycle include:

- Variable eco fees which increase with the size of the container
- Adjustment of product sector eco fees based on cost of managing the leftover product

- Consumer material including promotion of the “B.U.D.” rule, i.e. **B**uy what you need, **U**se what you buy and **D**ispose of the remainder responsibly.
- Research: Product Care is sponsoring a research project being conducted by the Engineering Department of the University of Western Ontario to determine the technical parameters and specifications for the use of leftover latex paint as a component of concrete manufacture.

2006-2011: Product Care will continue its participation with the Product Stewardship Institute <http://www.productstewardship.us/> which is examining a number of issues relating to paint stewardship including lifecycle analysis. Product Care will continue to interact with manufacturer associations such as Canadian Paint and Coatings Association to provide feedback to manufacturers regarding recyclability of both products and containers.

9. Recovery rate and targets: [s. 5(a)(i)(B) and s. 5 (a)(ii)]

The discussion of recovery rates and targets was major focus of the public consultation conducted by Product Care. A number of program performance measures and targets were considered. The challenges of setting appropriate recovery rates and targets for products that are intended to be consumed were well recognized. It was generally agreed that more than one performance criterion would need to be tracked.

2006-2011: Product Care will track and provide program performance measurement information as follows:

Product Recovered v Product Sold: Product Care will report litres sold and litres recovered for each product category on a year by year basis, and on a multi year rolling average basis to dampen any short term effects. The following table provides an example of single year data.

| 2005 | Paint (non aerosol) | Paint Aerosol | Flammable Liquids/Gasoline. | Pesticides |
|------------------------------------|------------------------|---------------|-----------------------------|------------|
| Sales (litres) ¹ | 34,427,693 | 889,053 | 5,279,334 ² | 125,735 |
| Recovery (litres) | 2,164,042 ³ | 17,360 | 54,386 ⁴ | 7,656 |
| % recovery v sales | 6.3% | 2.0% | 1.0% | 6.1% |

Notes:

1. “Sales (litres)” are calculated by converting the number of units reported sold using typical container volumes for each eco fee category.
2. flammables “Sales (litres)” figure does not include gasoline. Gasoline sector members do not report sales volumes to Product Care.
3. includes volume recovered via “paint exchange” program
4. represents combined flammable liquids and gasoline collection volumes

Historical comparison: Product Care will compile and present the Product Recovered v Product Sold data on a multi year basis in order to demonstrate trends.

Waste audit participations: Despite the small sample sizes of HHW in waste audits, data from a number of waste audits may provide useful information. Product Care will participate in a number of waste audits in partnership with local governments and compare results in order to determine if the data does present meaningful information.

Consumer awareness: Product Care proposes to conduct a consumer awareness survey within 12 months of the date of this plan, as part of its communication program which will be repeated periodically. The survey will measure level of consumer awareness and gather valuable information to improve the program.

10. Satisfactory consultation with stakeholders [Section 5 (1) (b)]

Product Care conducted a stakeholder consultation process in September 2006 as a prerequisite to the filing of this plan. The consultation included:

- Web based consultation using Product Care website www.productcare.org
- Email communication to stakeholders
- Regional consultations held in 4 regions: Lower Mainland, Vancouver Island (meetings), Southern Interior and Northern BC (telephone conference calls)
- Written submission provided by stakeholders

* * *

Submitted by
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